

FIG. 1

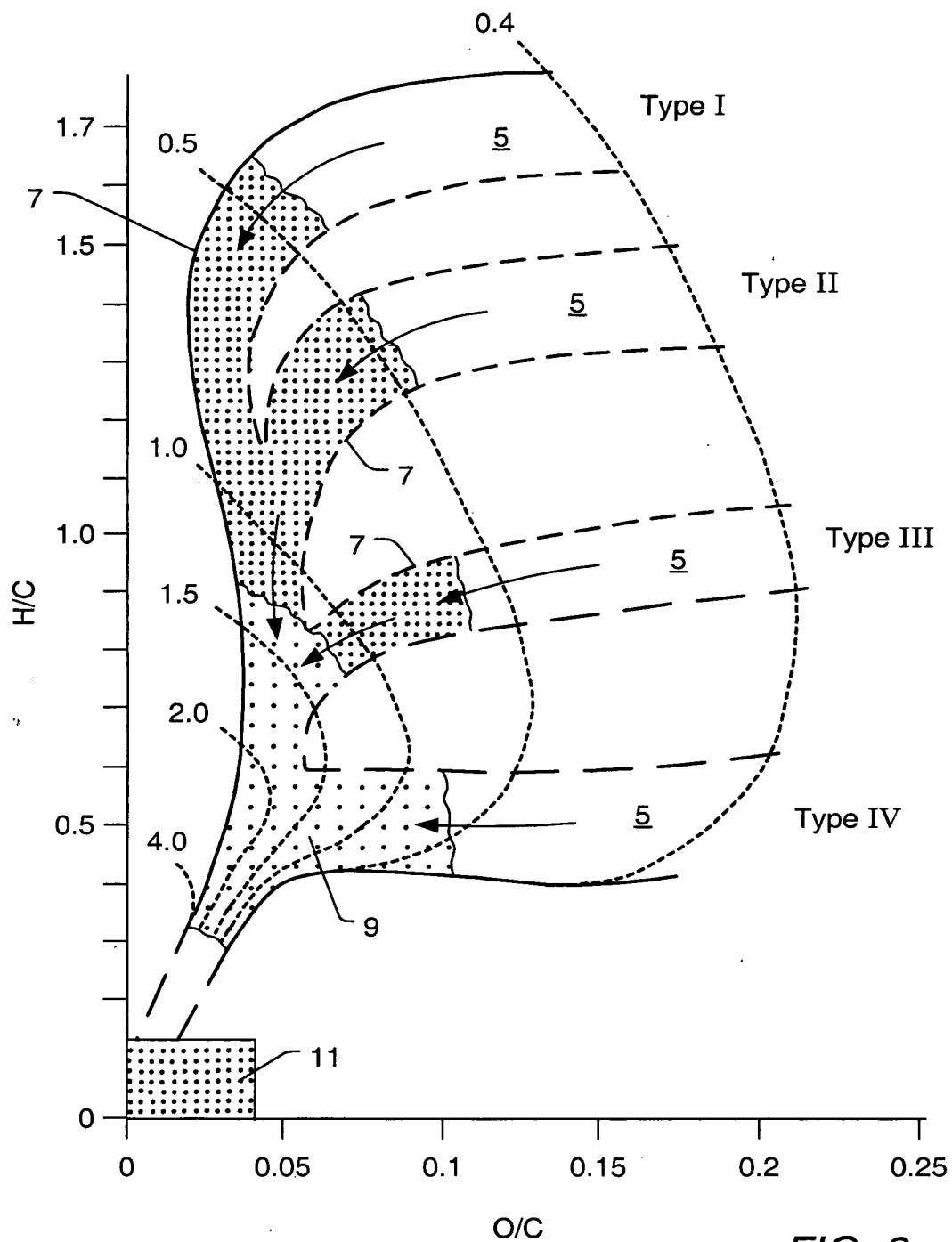
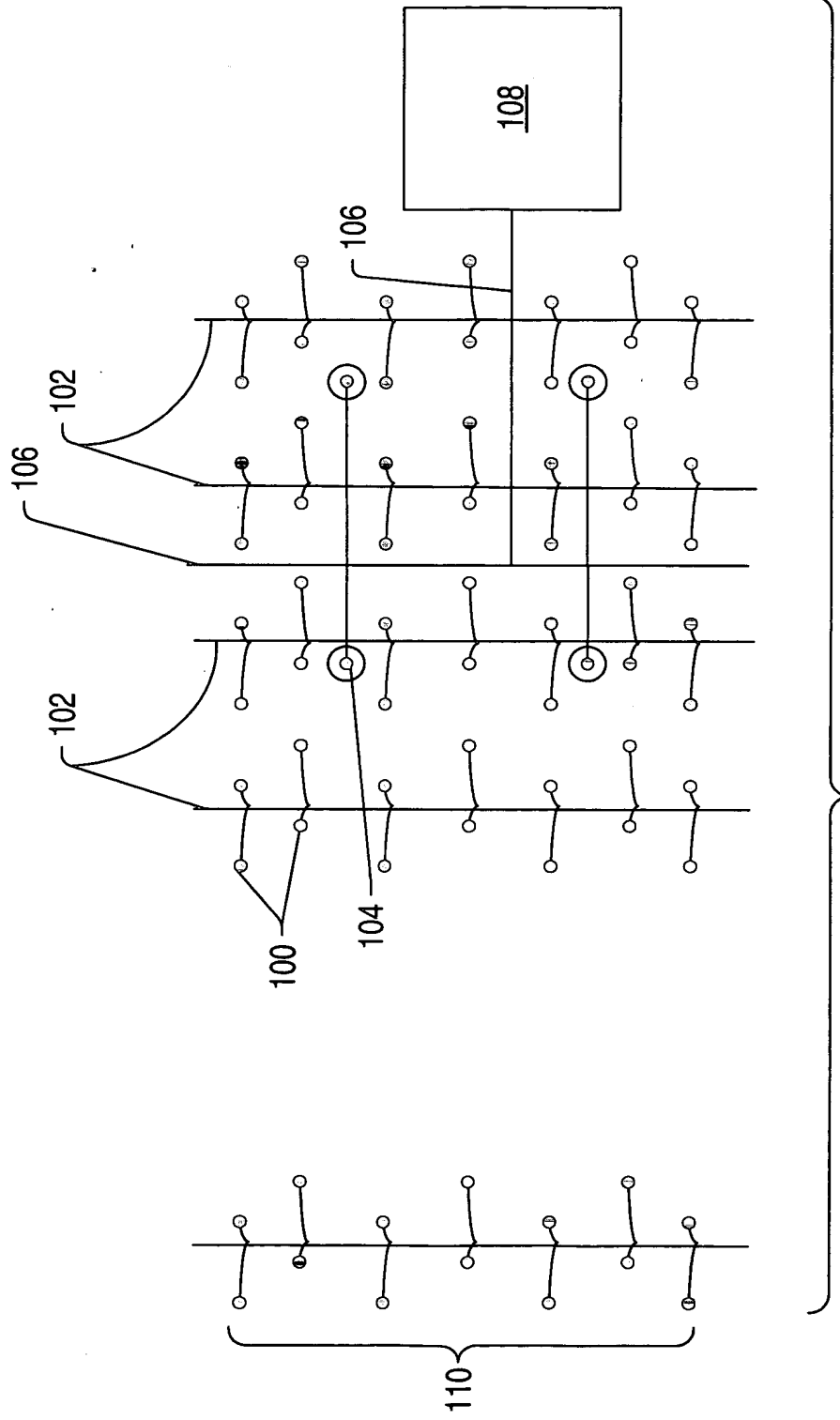


FIG. 2



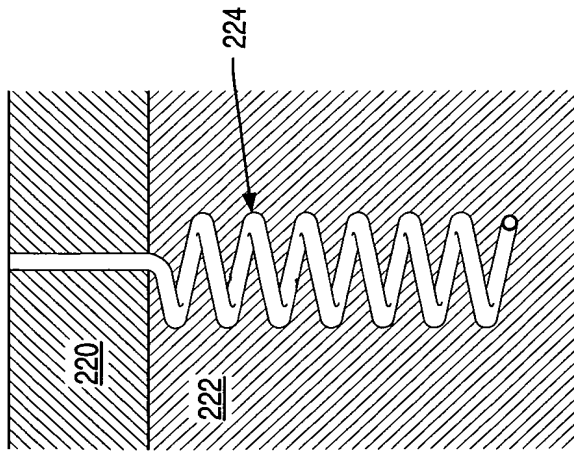


FIG. 3a

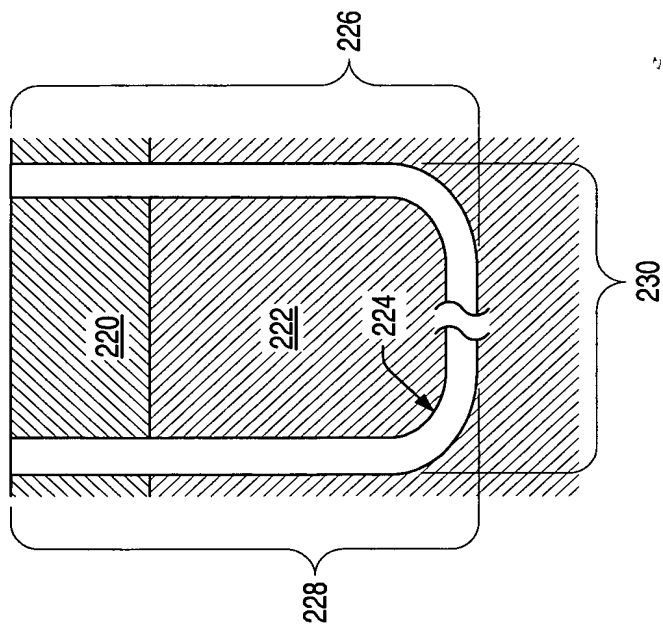


FIG. 3b

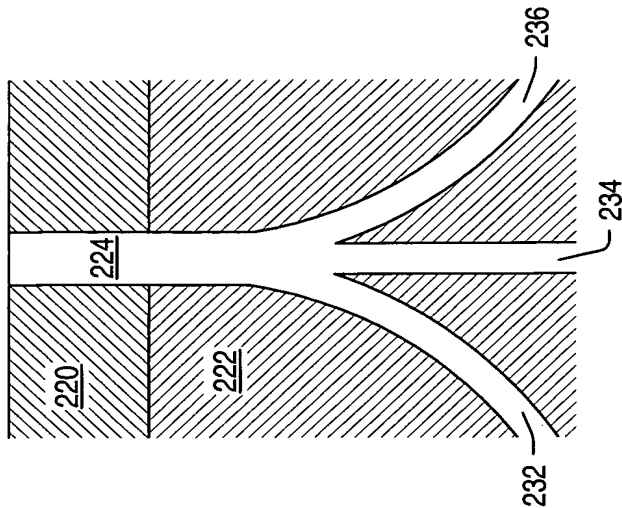


FIG. 3c

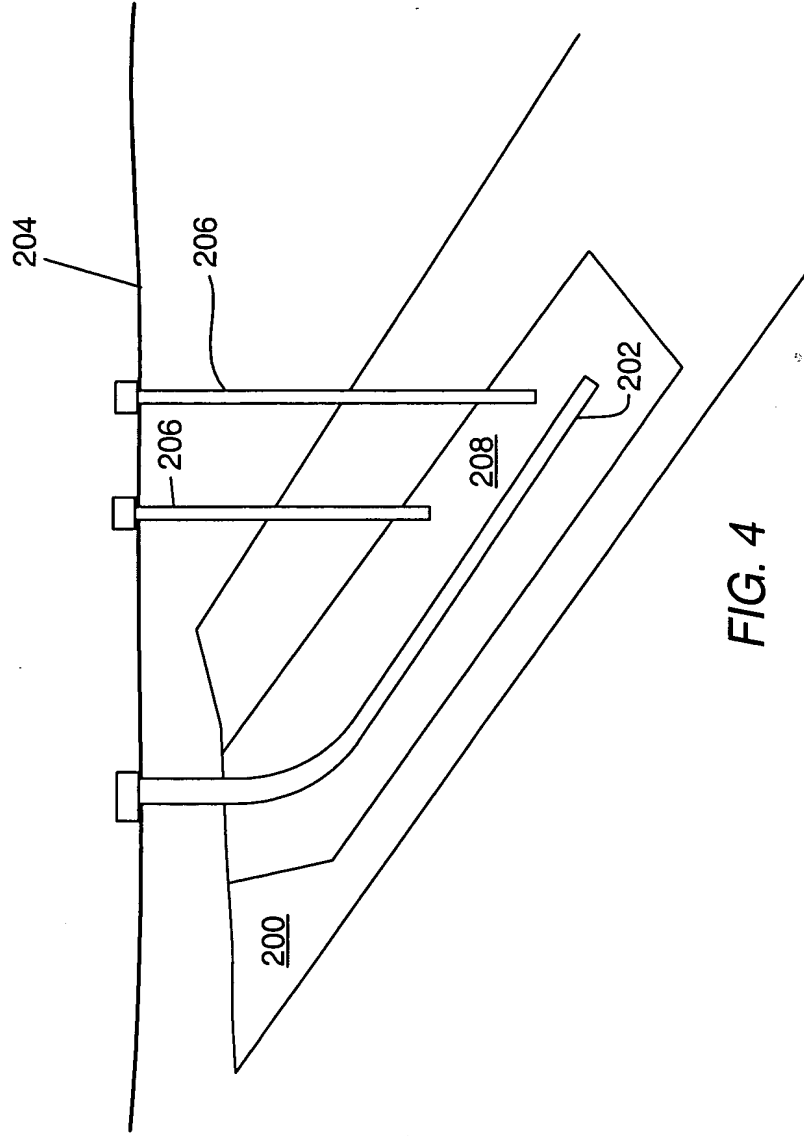
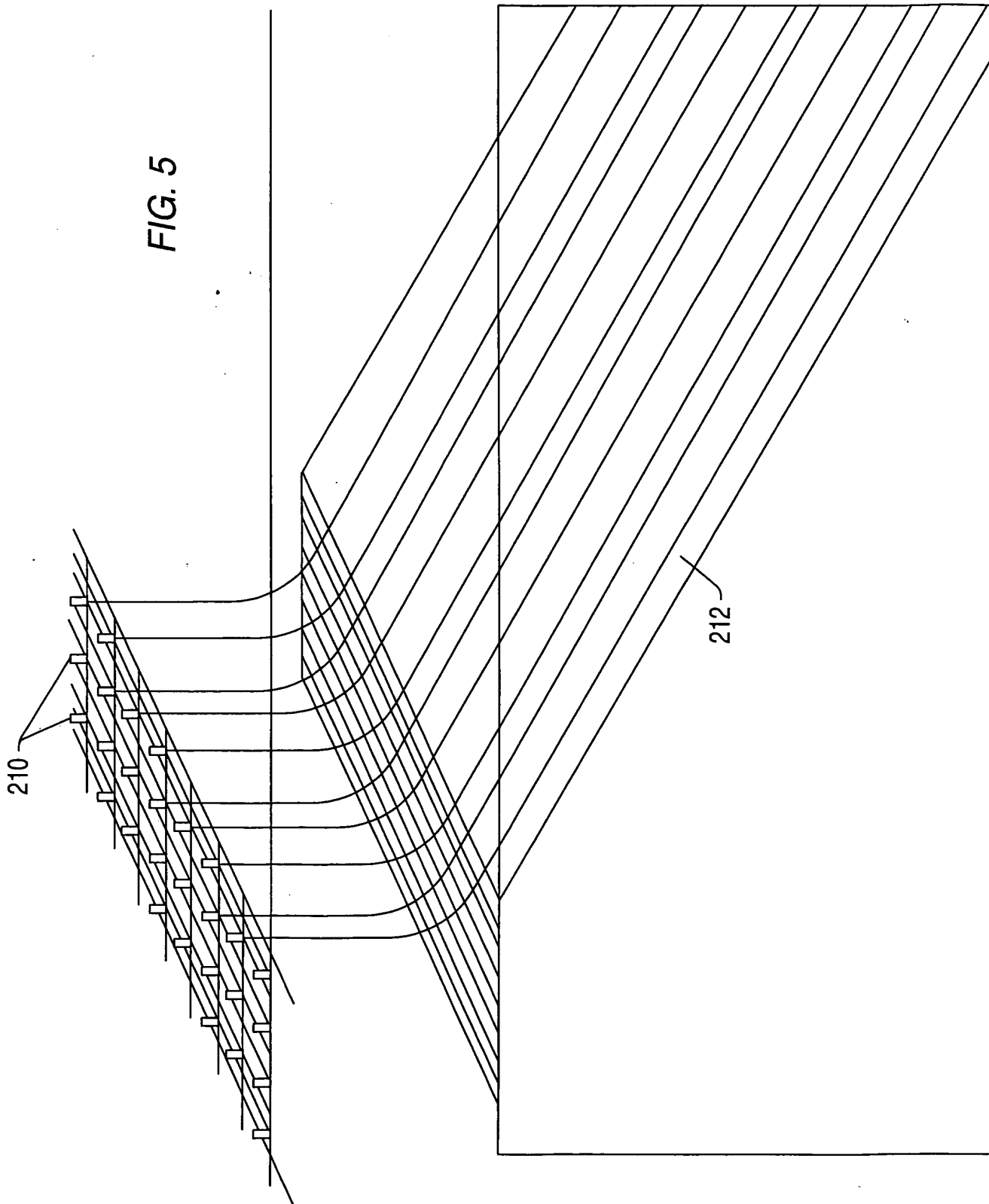


FIG. 4



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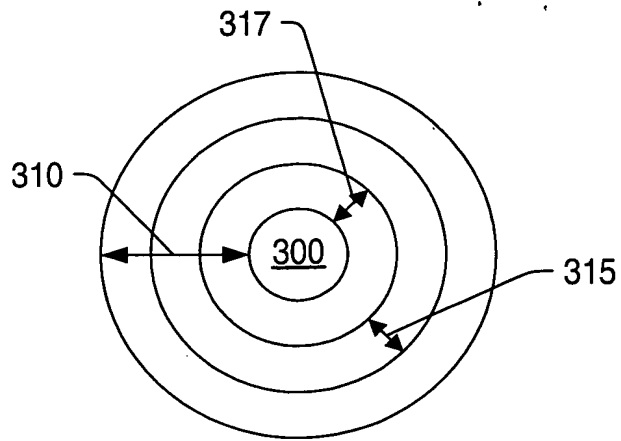


FIG. 6

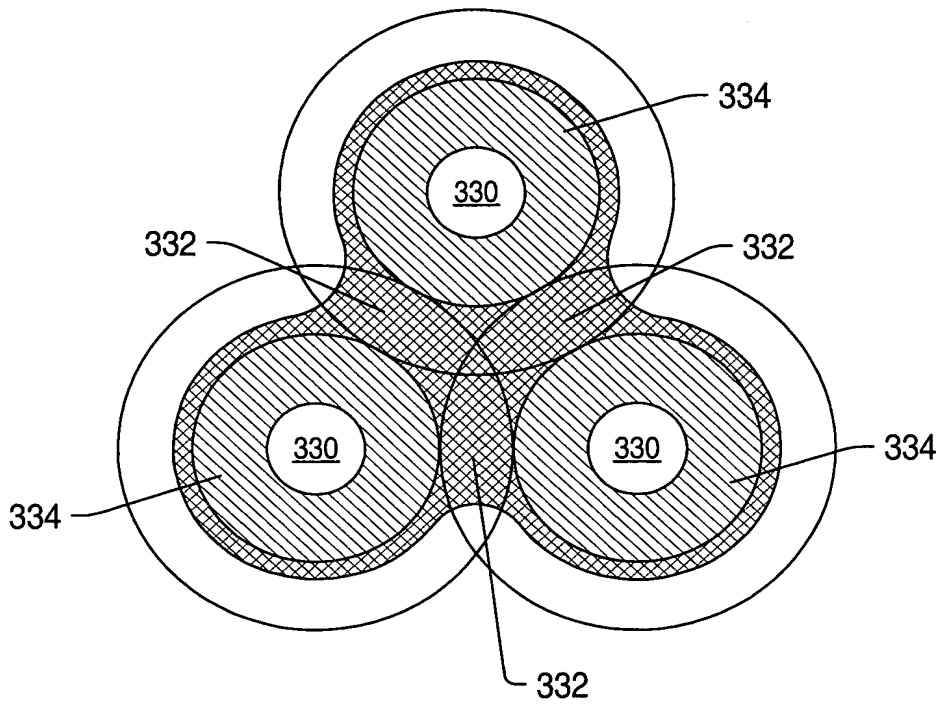


FIG. 7

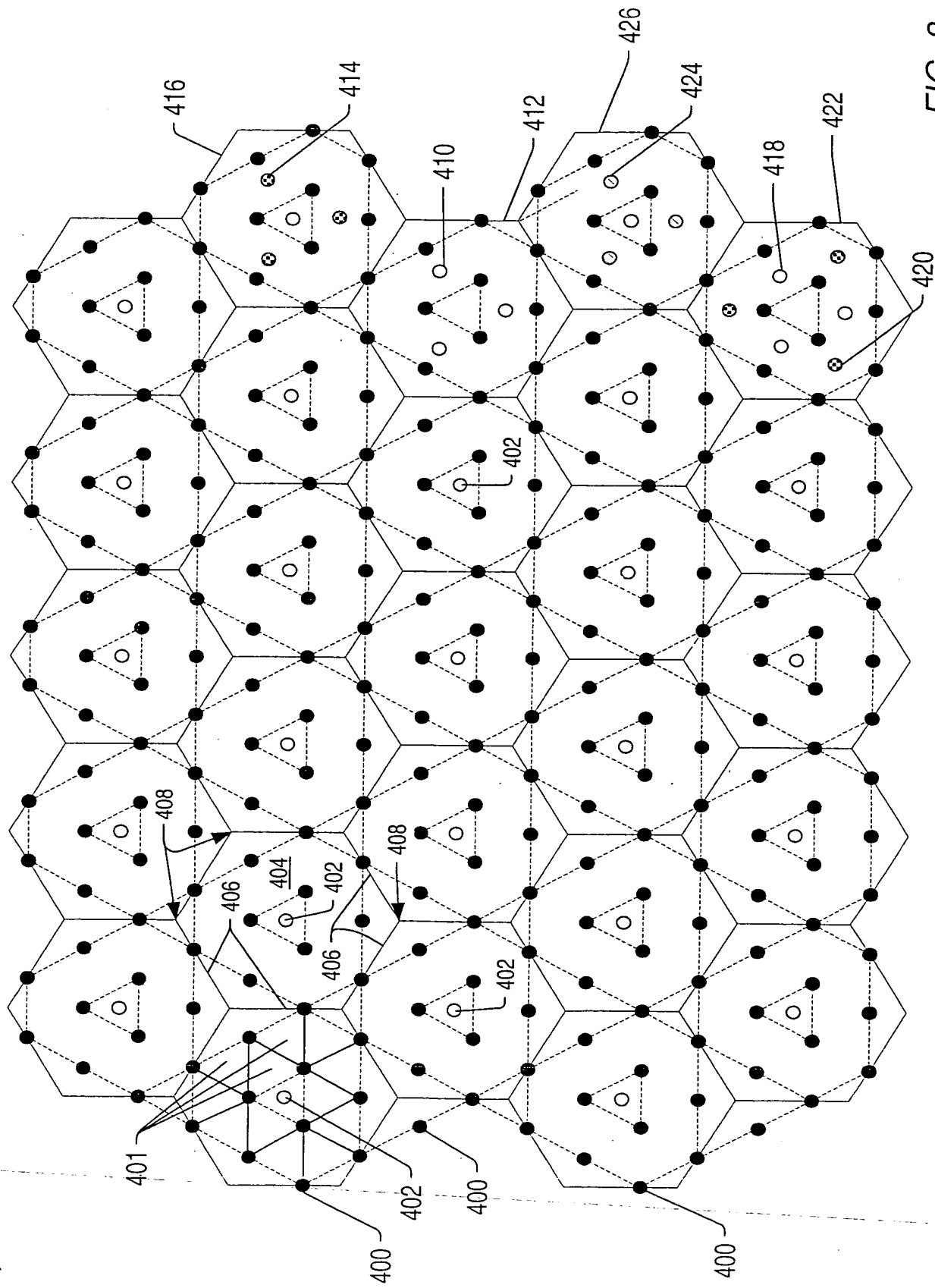


FIG. 8

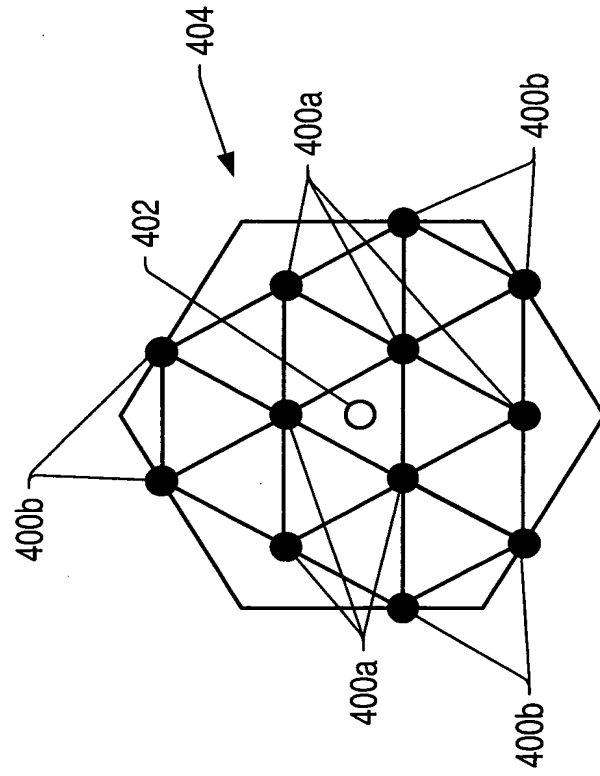


FIG. 9

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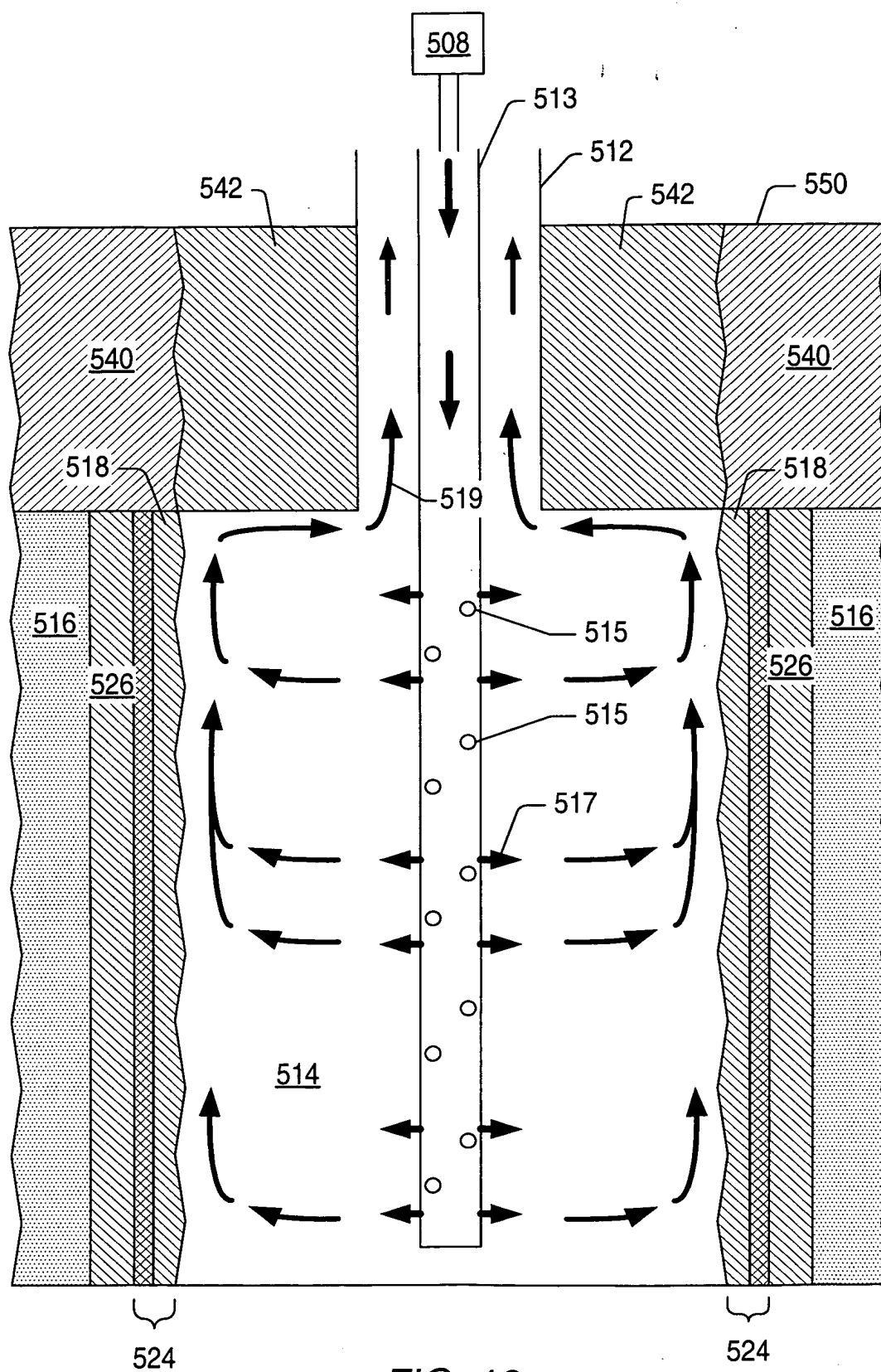


FIG. 10

09841305.042401

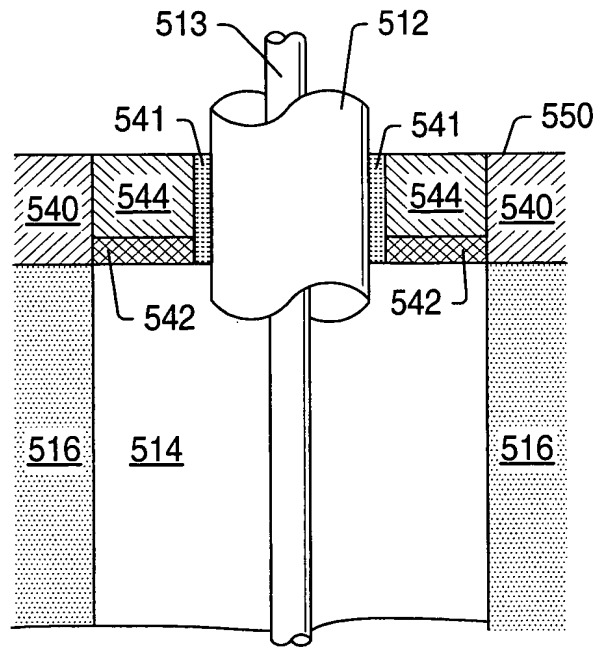


FIG. 11

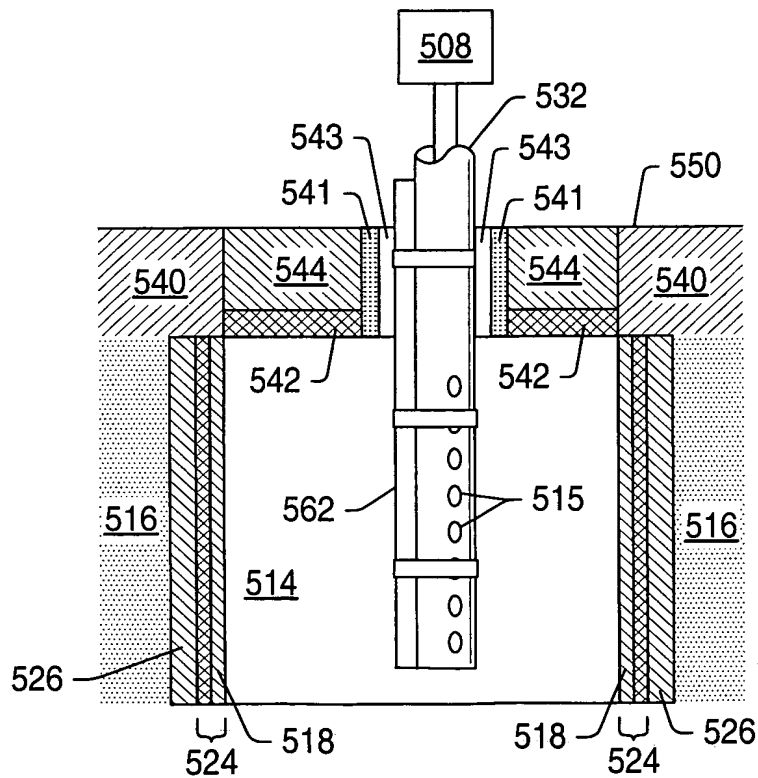


FIG. 12

This diagram shows a cross-section of a wellbore completion system. A central tubing string (543) is positioned within a wellbore (514). The tubing string has an inner lumen (535) and an outer lumen (515). The wellbore is lined with a casing (516) and a cement sheath (518). The tubing string is surrounded by a filter cake (542) and a filter screen (544). The filter screen is supported by a sleeve (540) and a packer (550). The filter cake is formed by a material (526) that is applied to the inner surface of the casing (516) and the outer surface of the tubing string (543). The filter cake is applied in a way that it seals the annulus between the casing and the tubing string, preventing fluid from entering the wellbore. The filter cake is applied to the inner surface of the casing (516) and the outer surface of the tubing string (543) in a way that it seals the annulus between the casing and the tubing string, preventing fluid from entering the wellbore.

Fig. 13

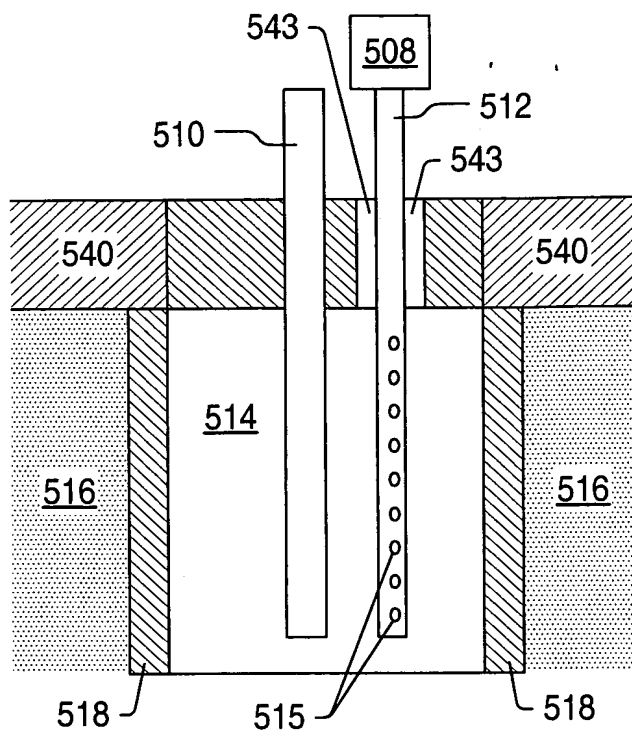


FIG. 14

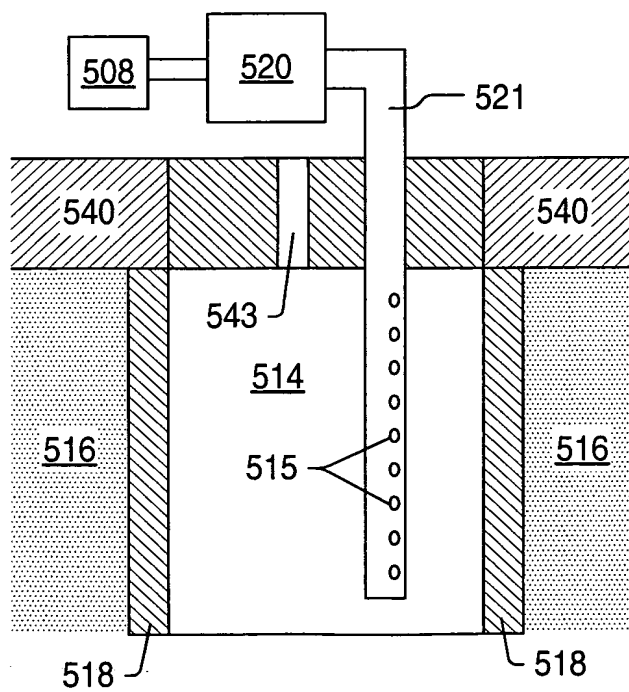


FIG. 15

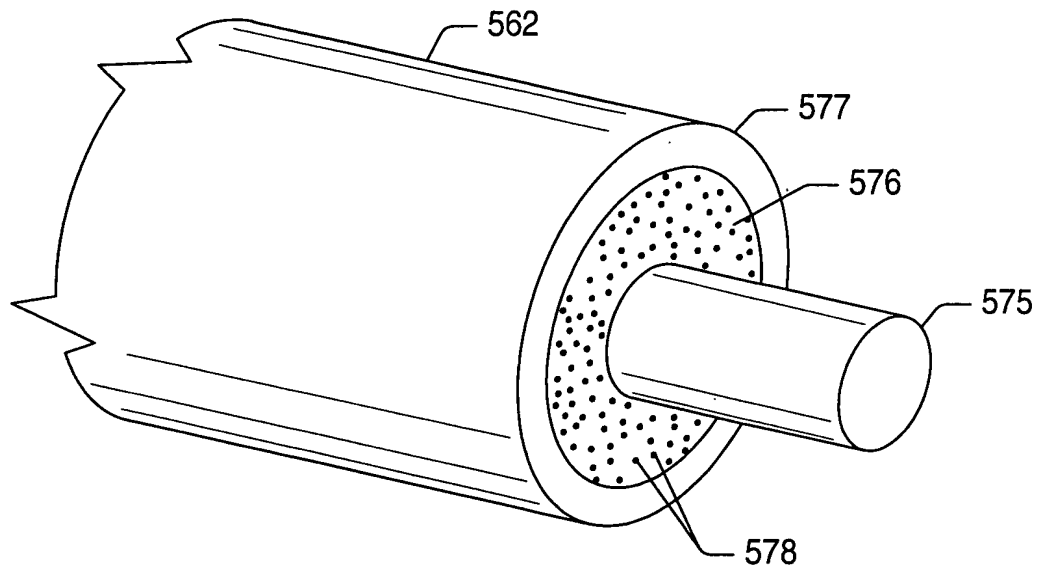


FIG. 16

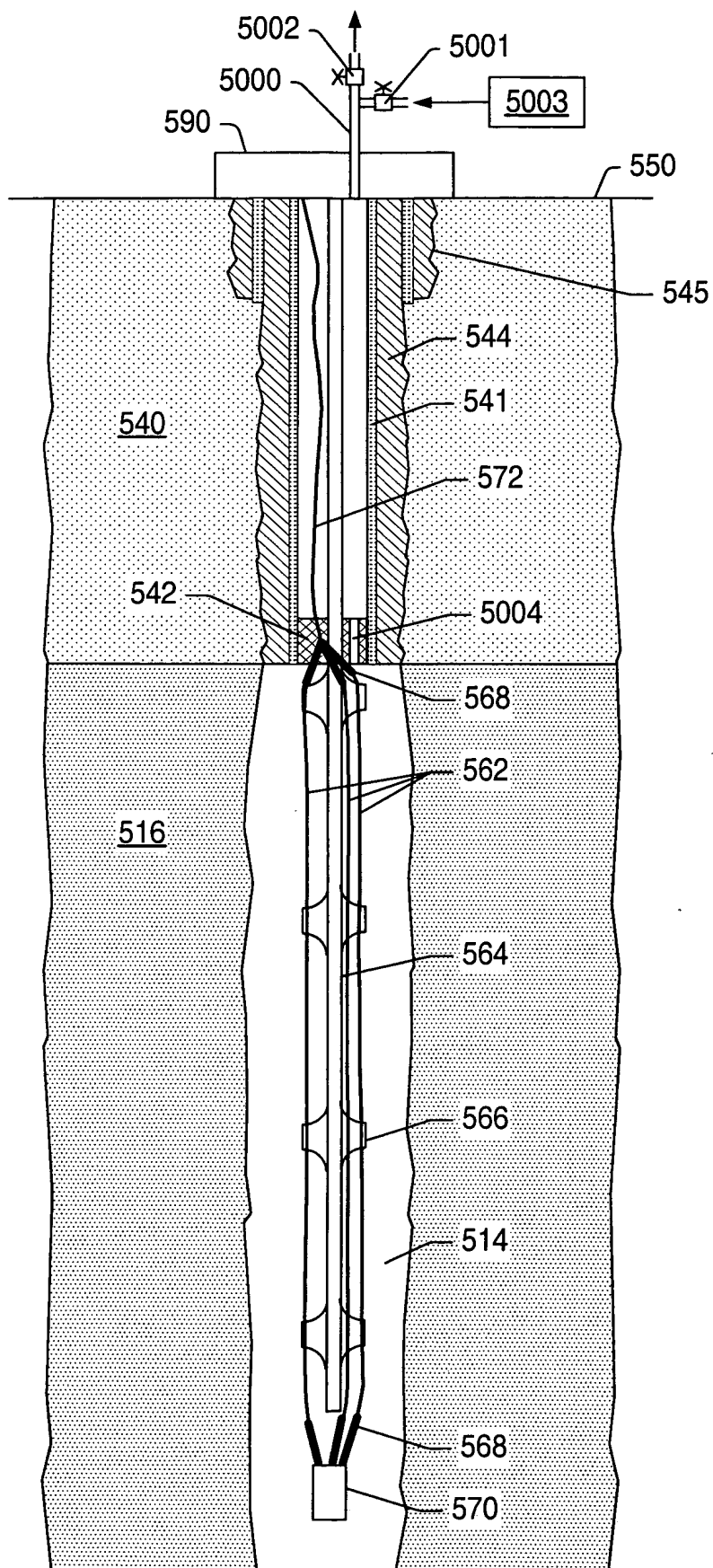


FIG. 17

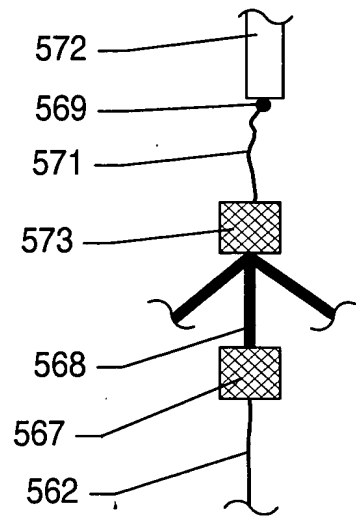


FIG. 17A

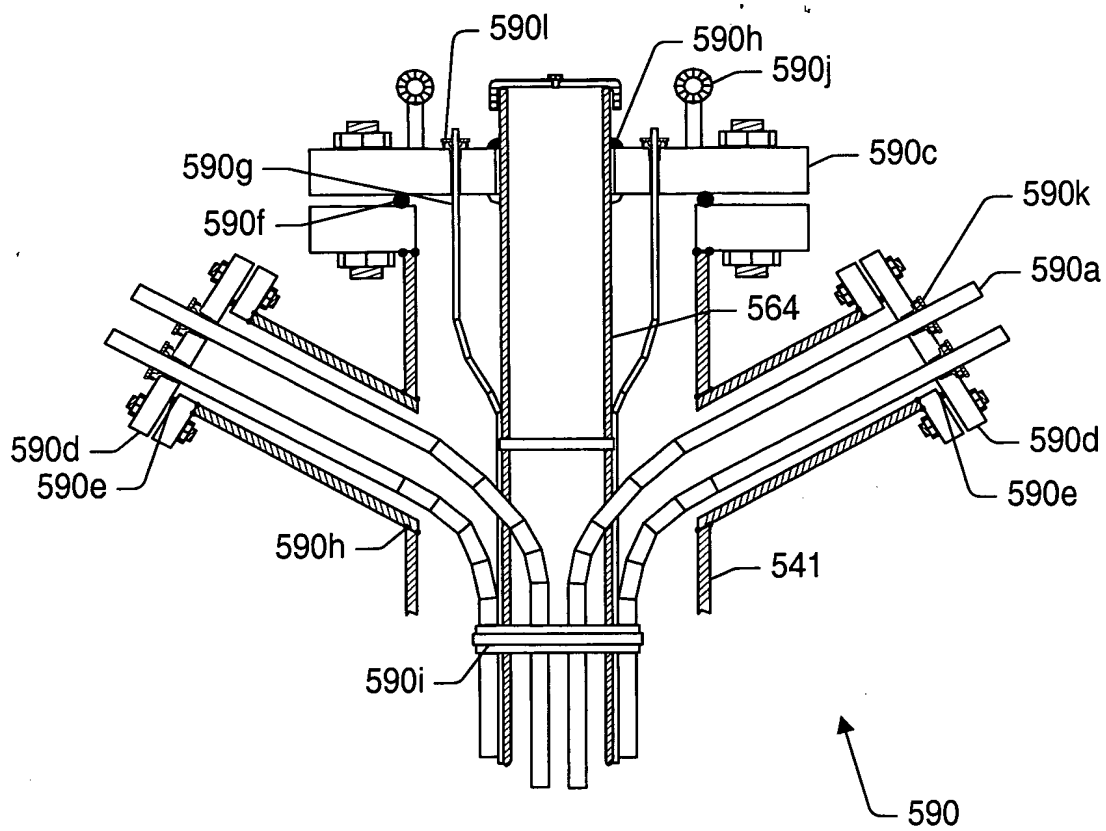


FIG. 18

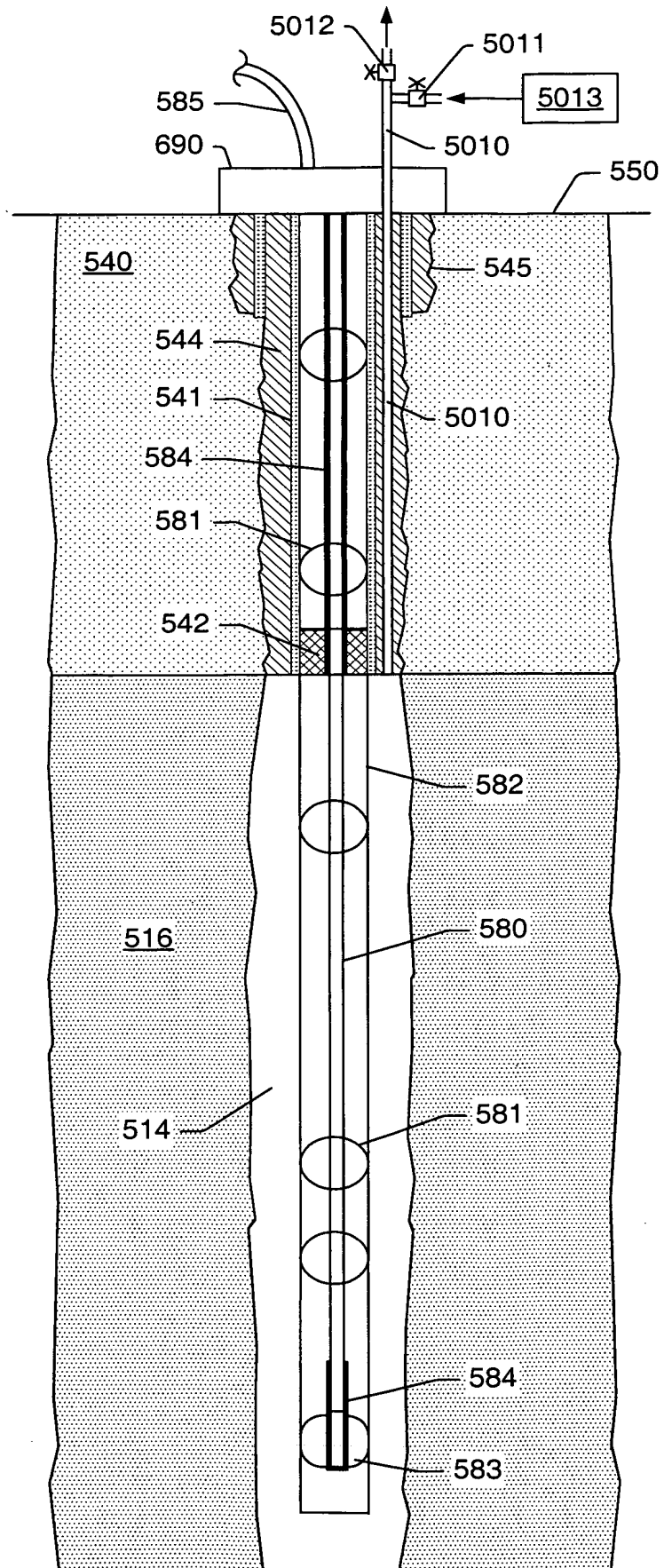


FIG. 19

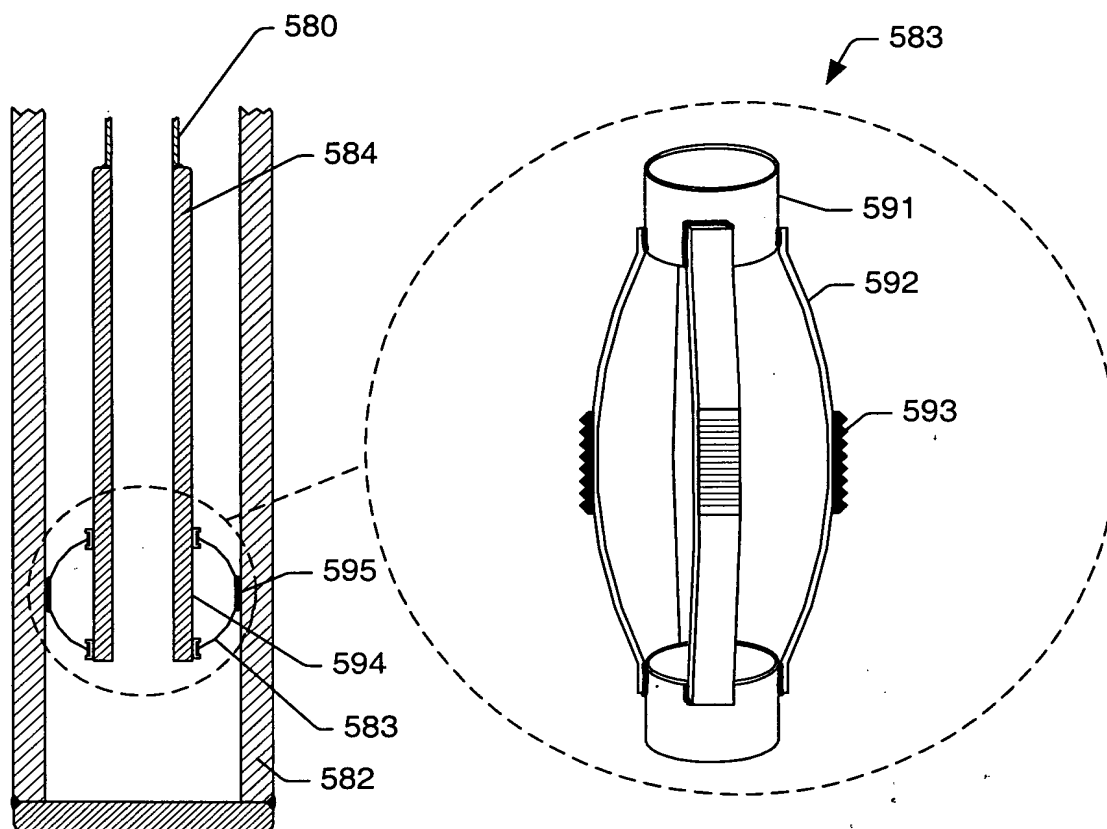


FIG. 20

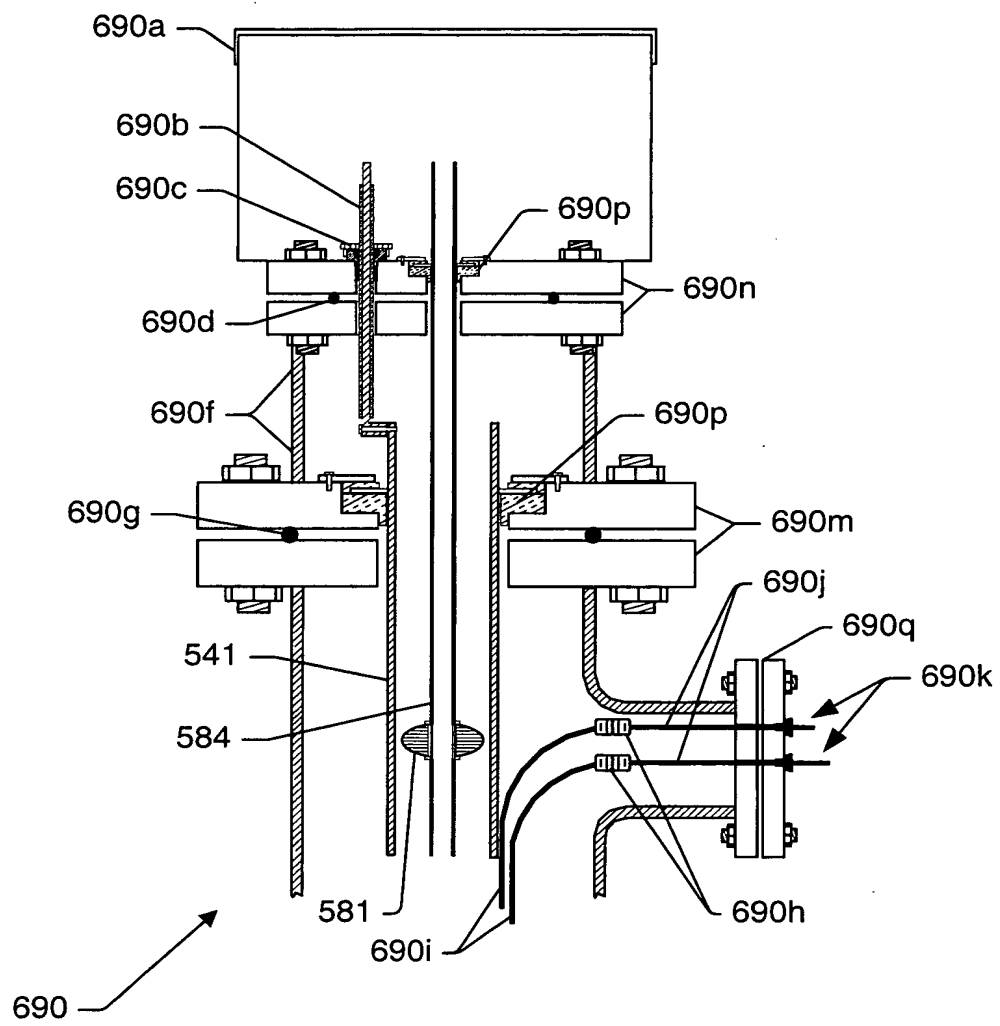


FIG. 21

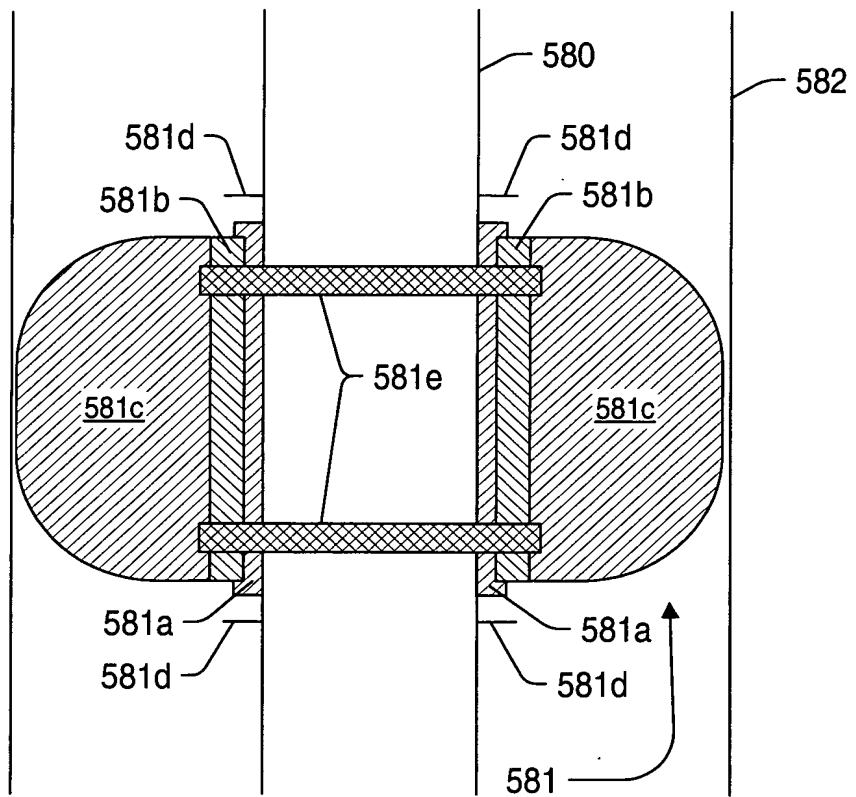


FIG. 22

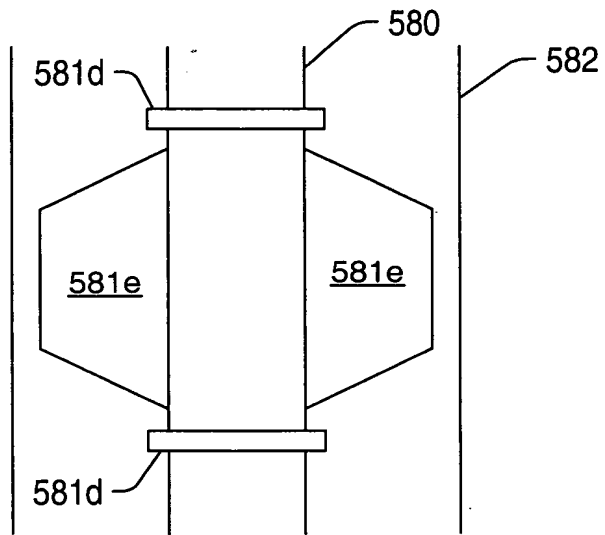


FIG. 23a

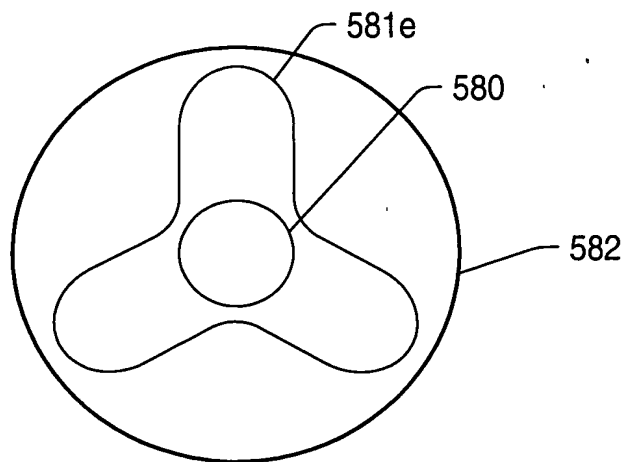


FIG. 23b

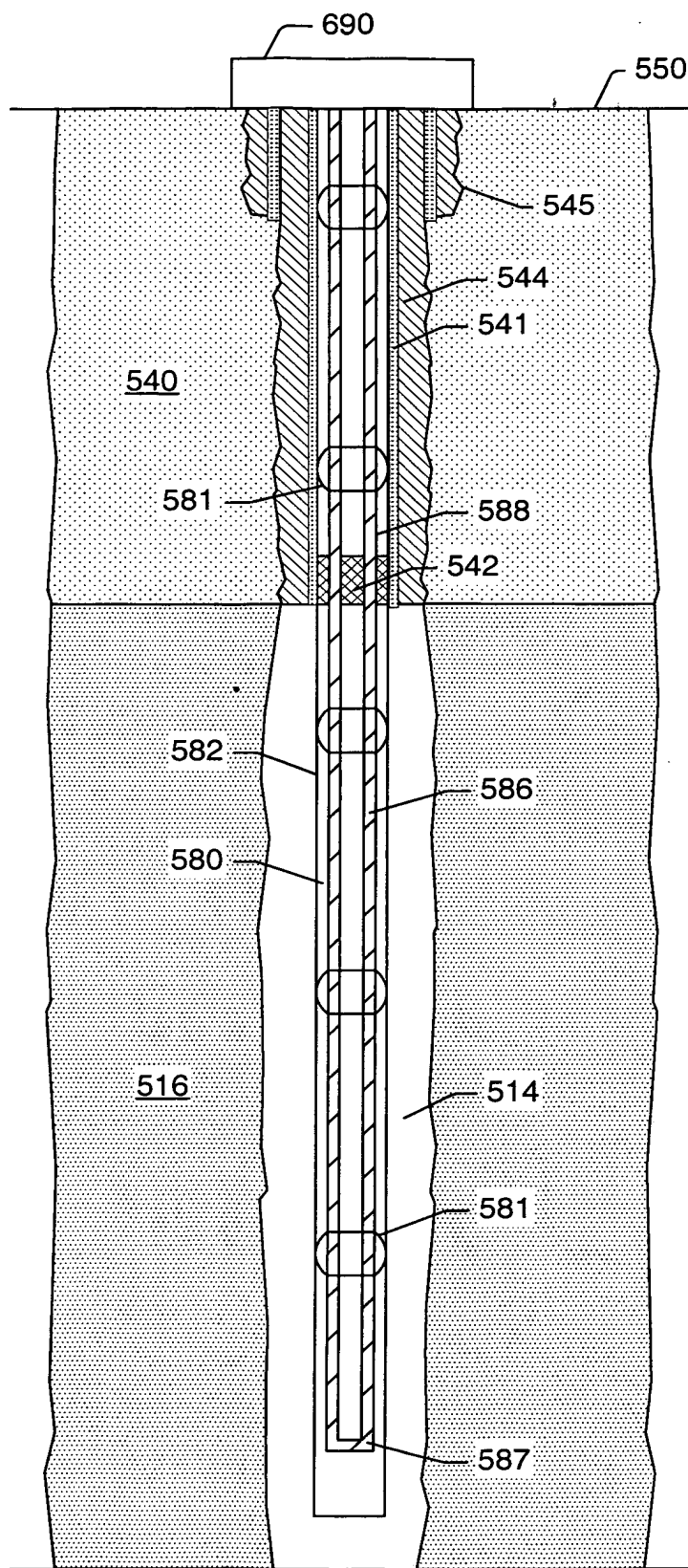


Fig. 24

FIG. 25

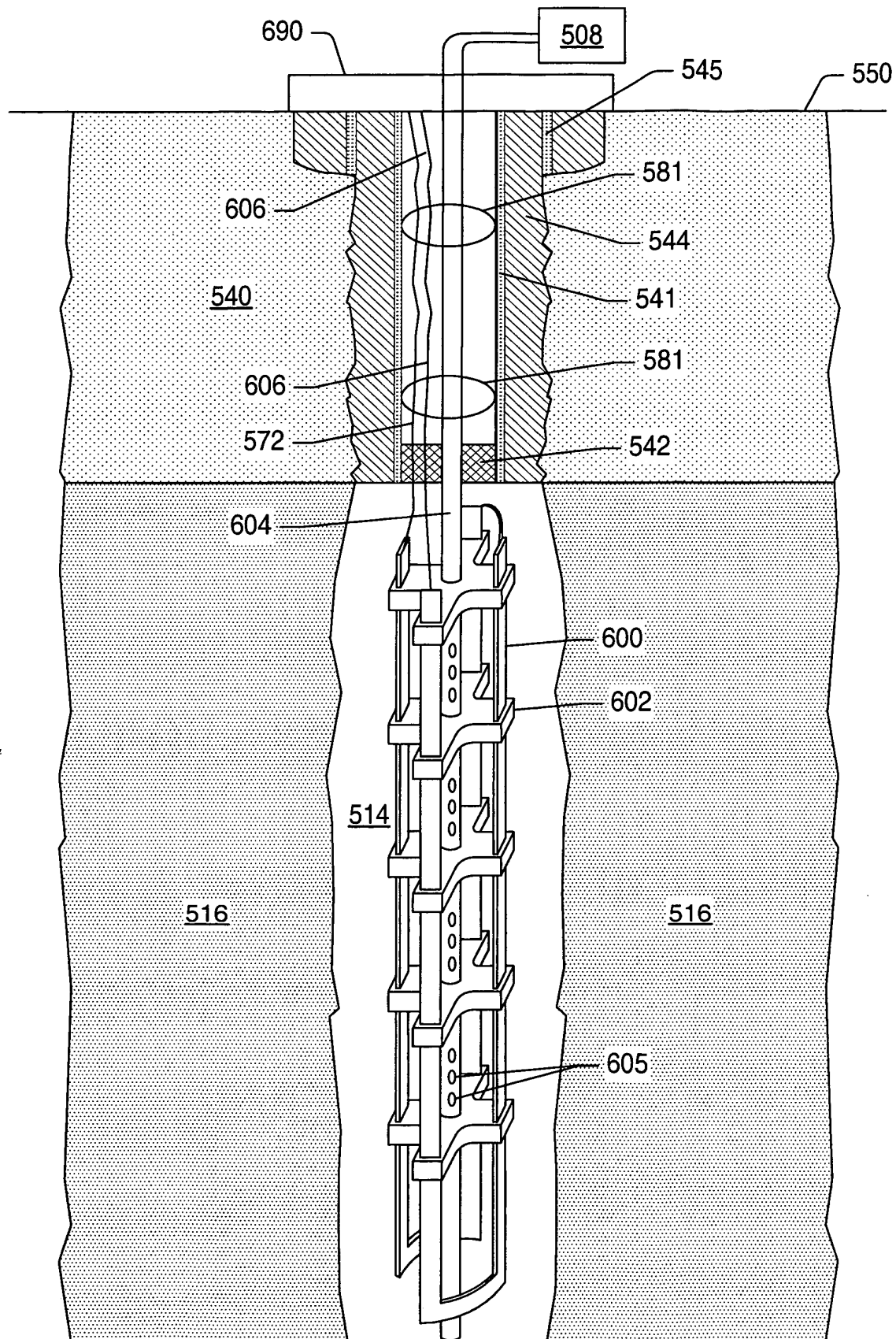


FIG. 25

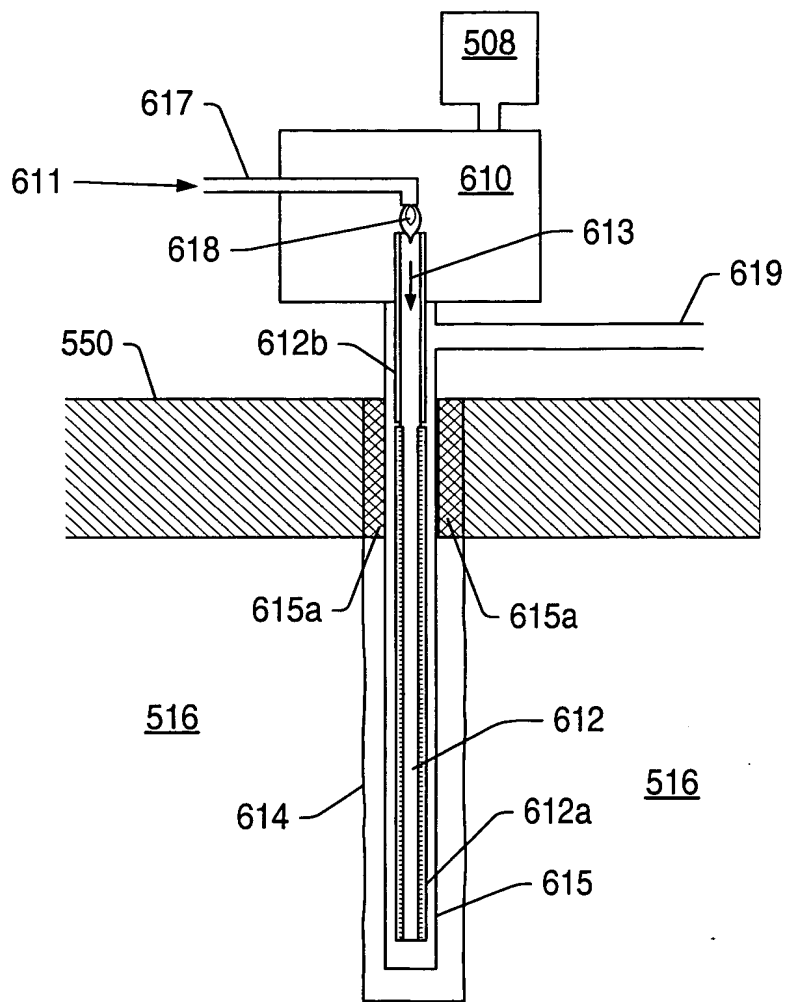


FIG. 26

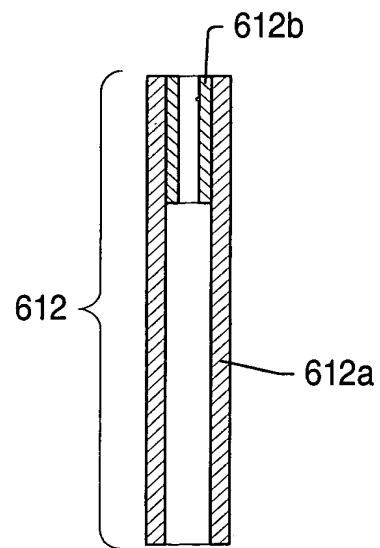


FIG. 27

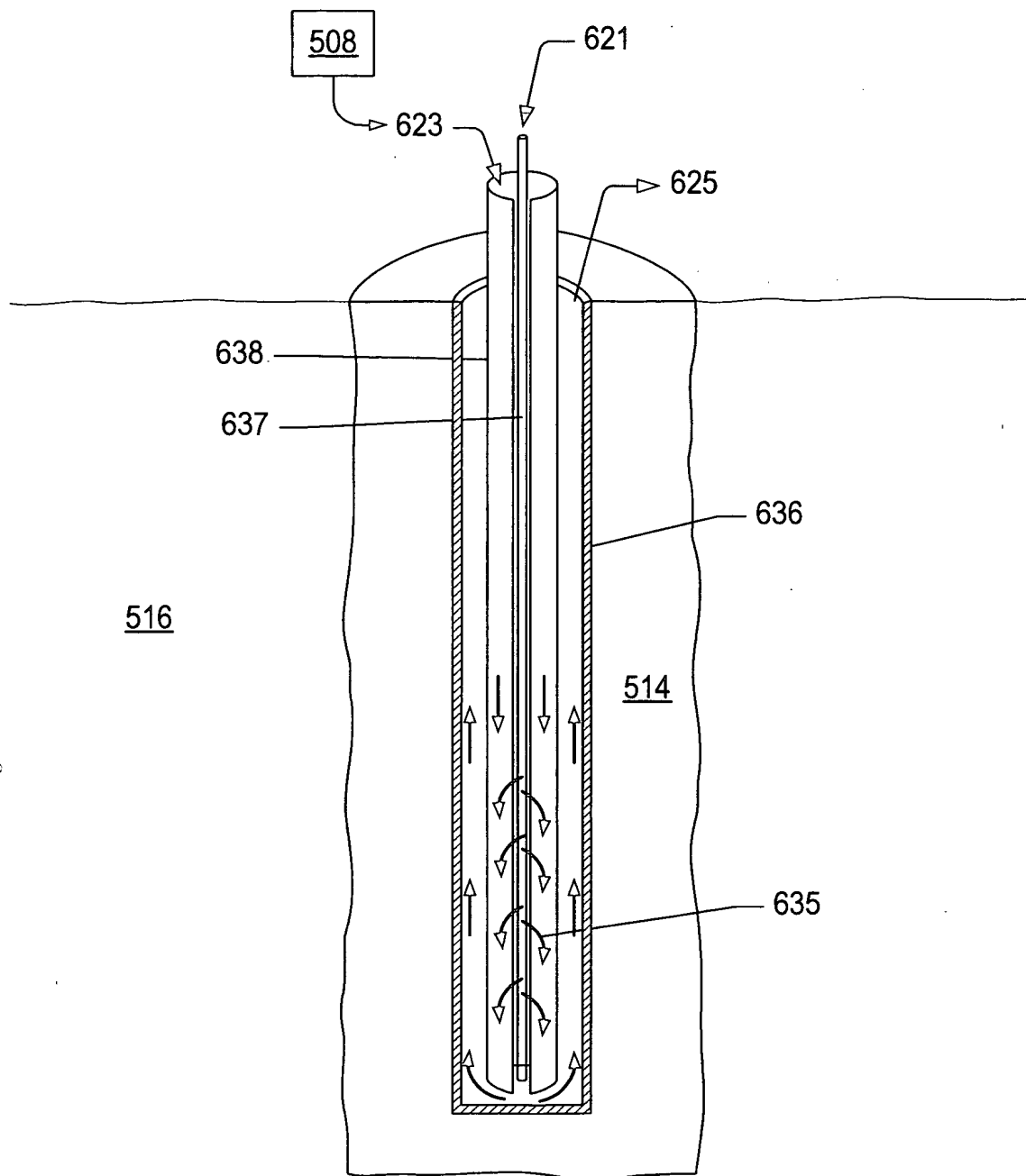


FIG. 28

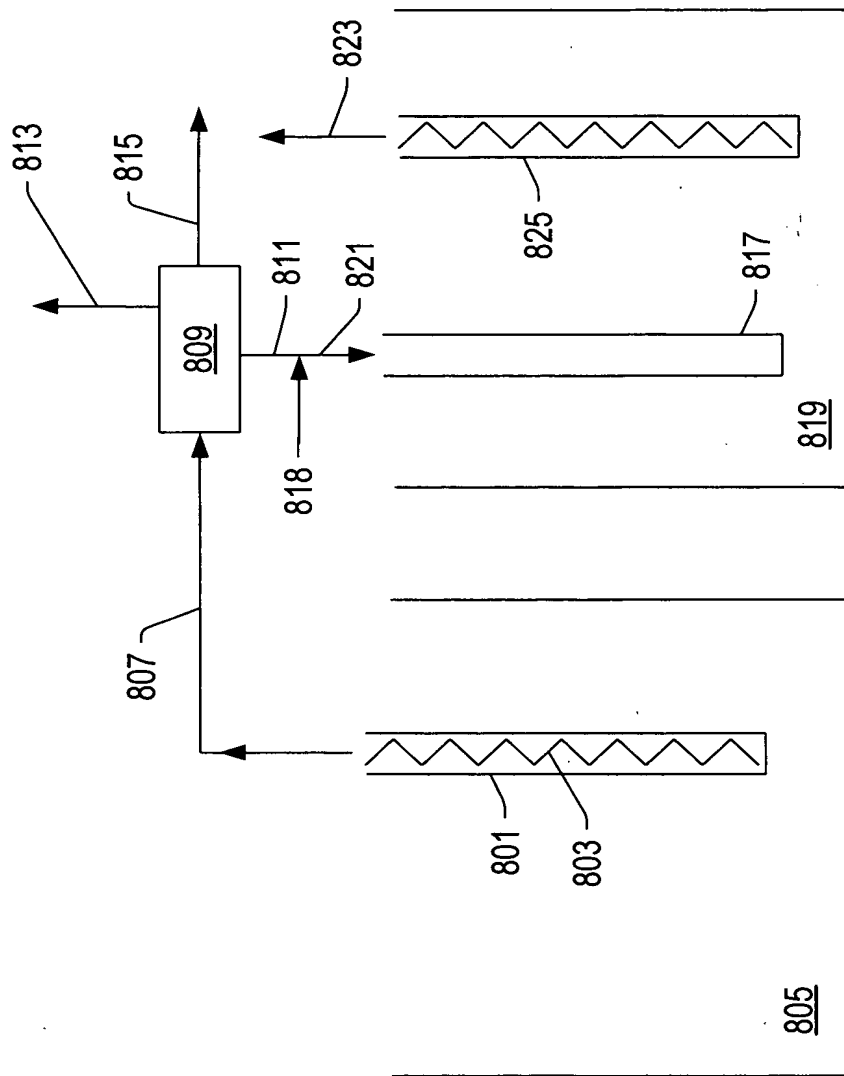


FIG. 29

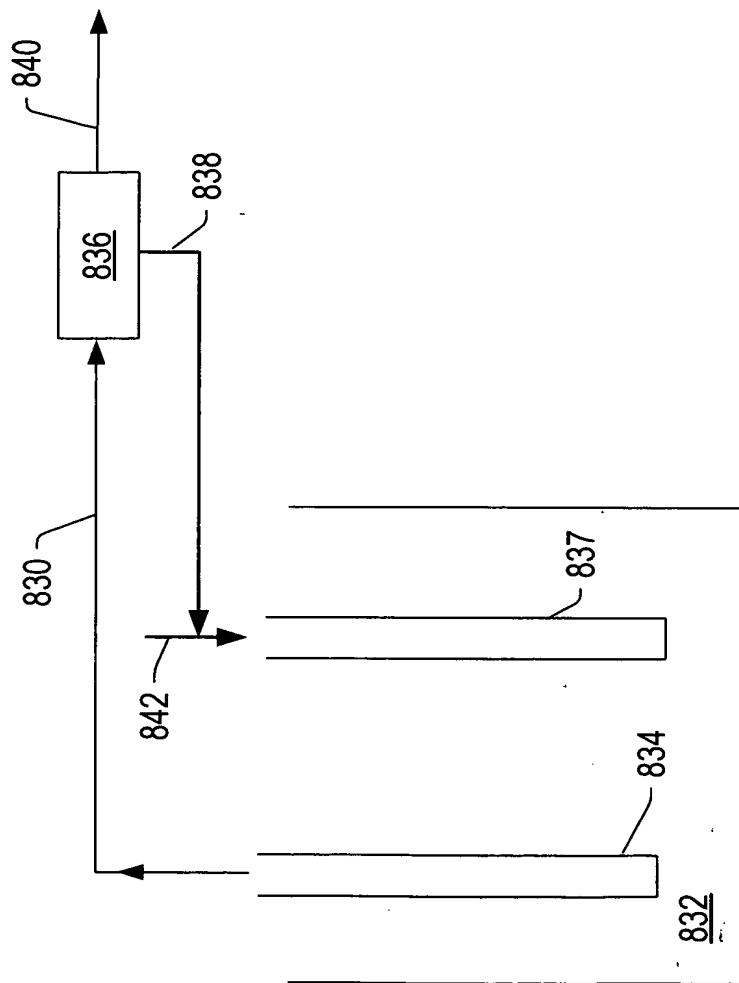


FIG. 30

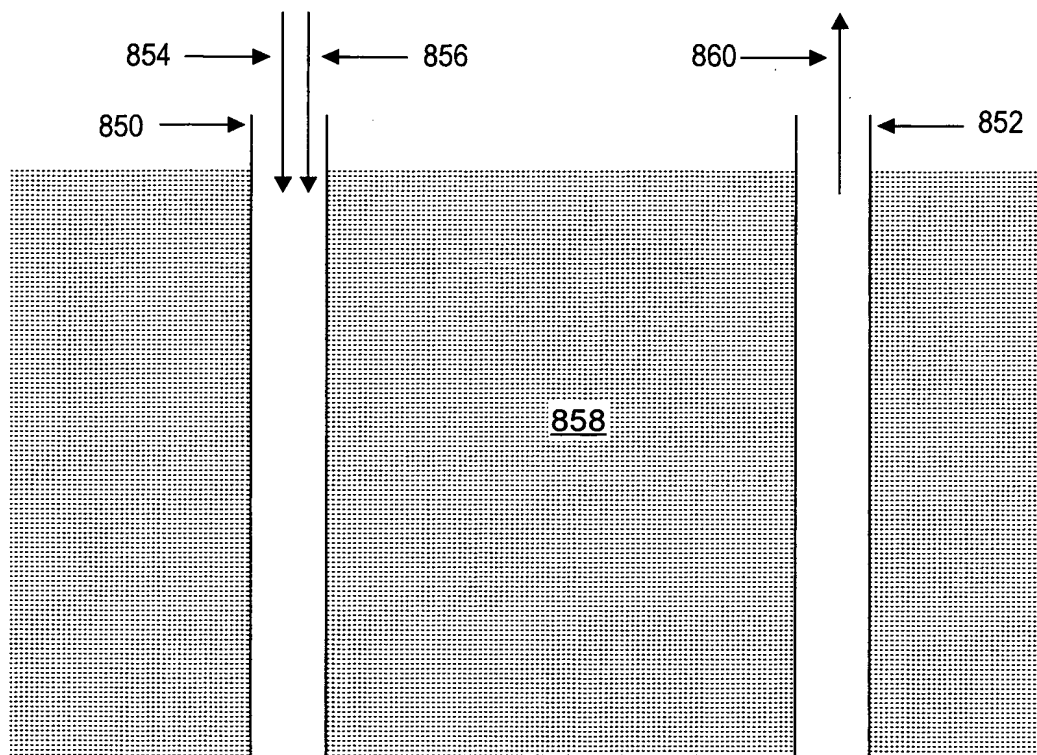


FIG. 31

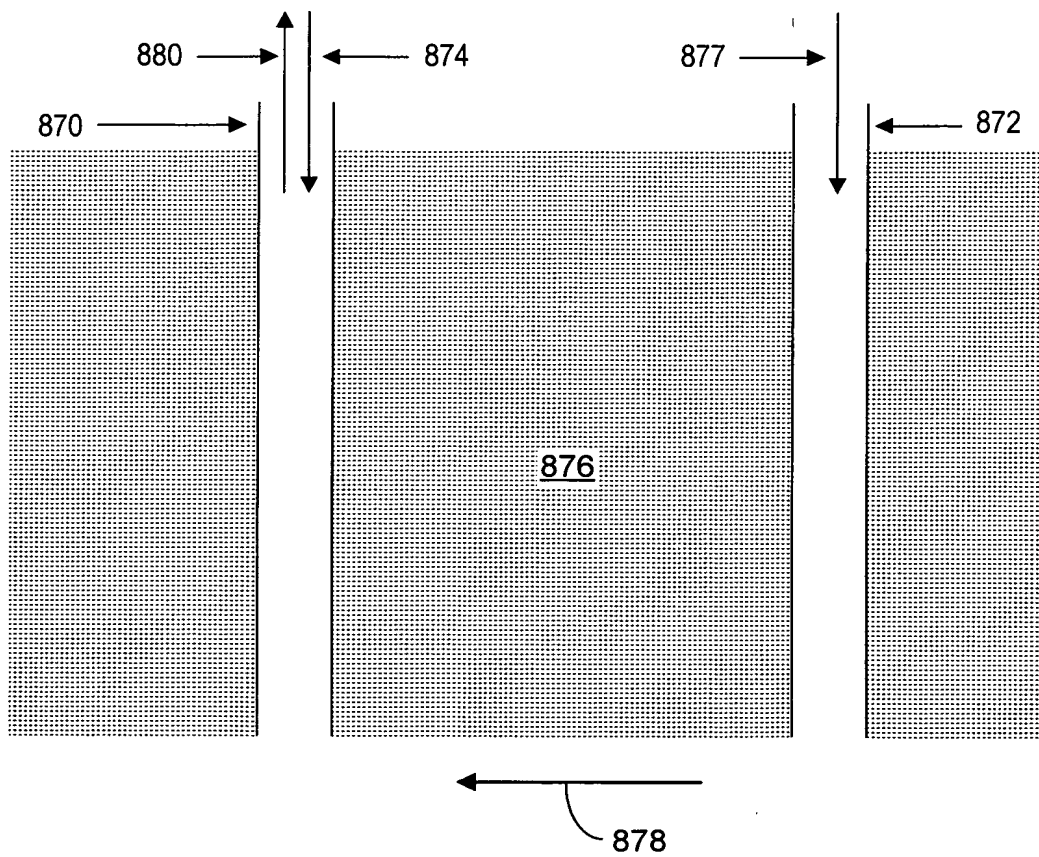


FIG. 32

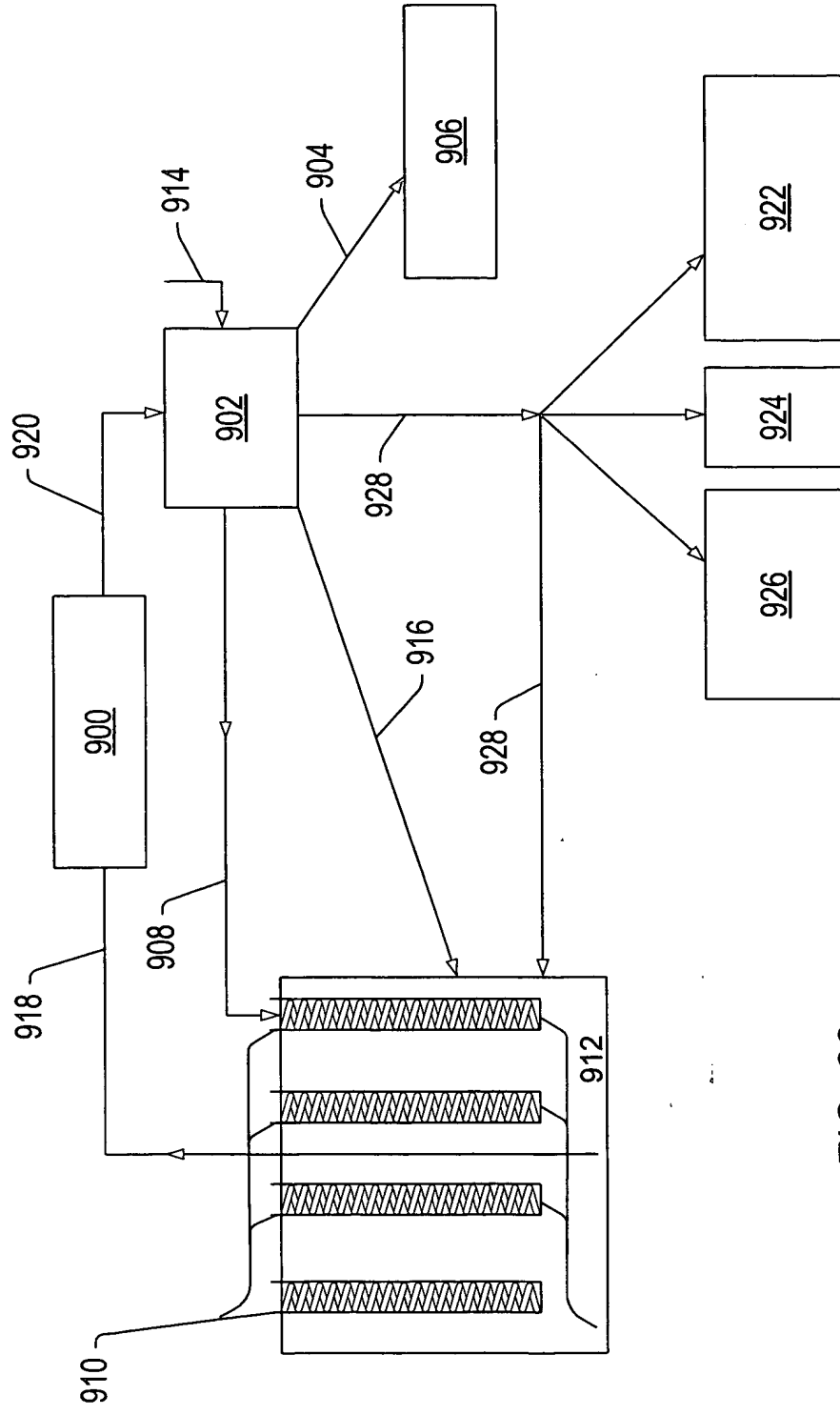


FIG. 33

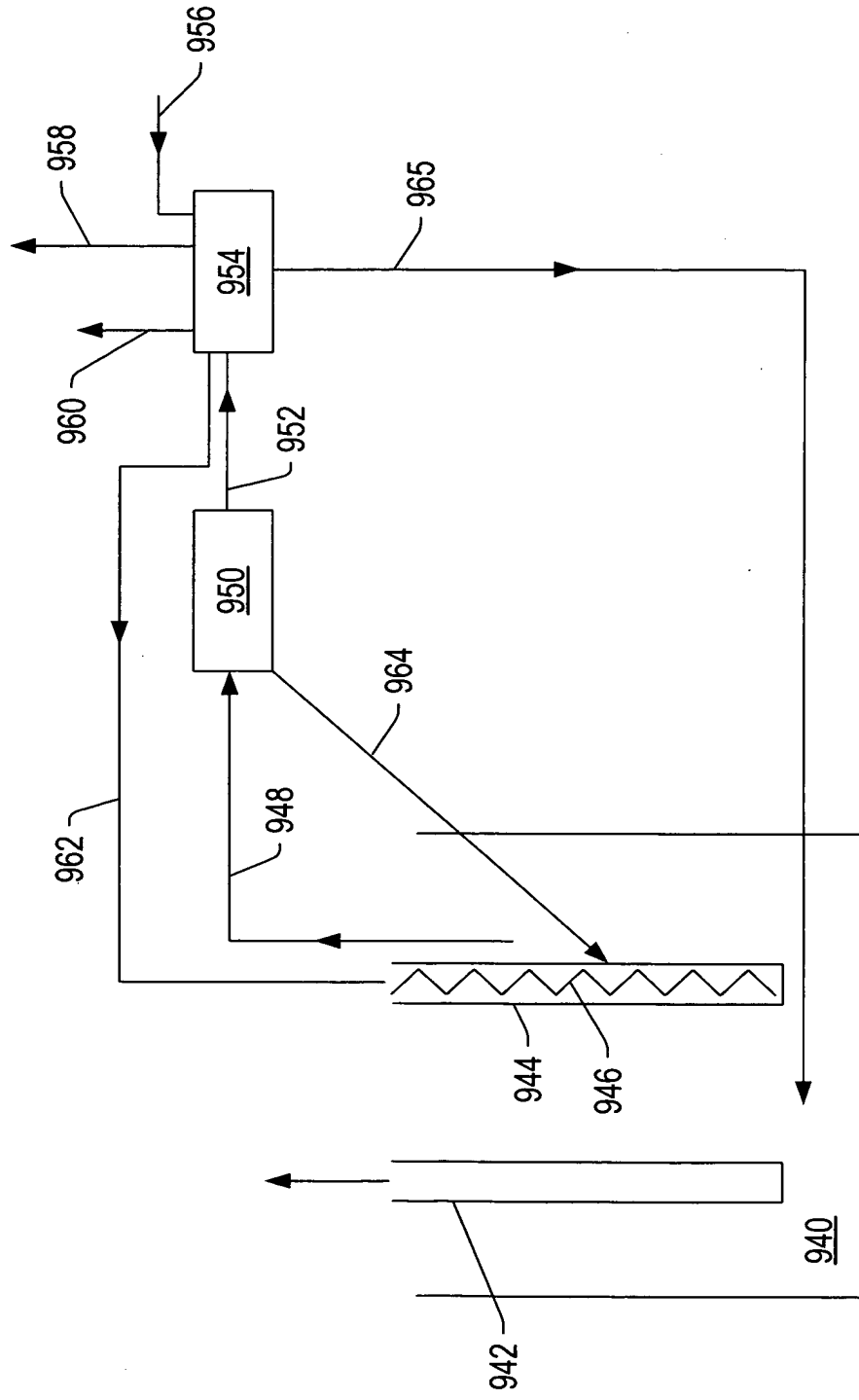


FIG. 34

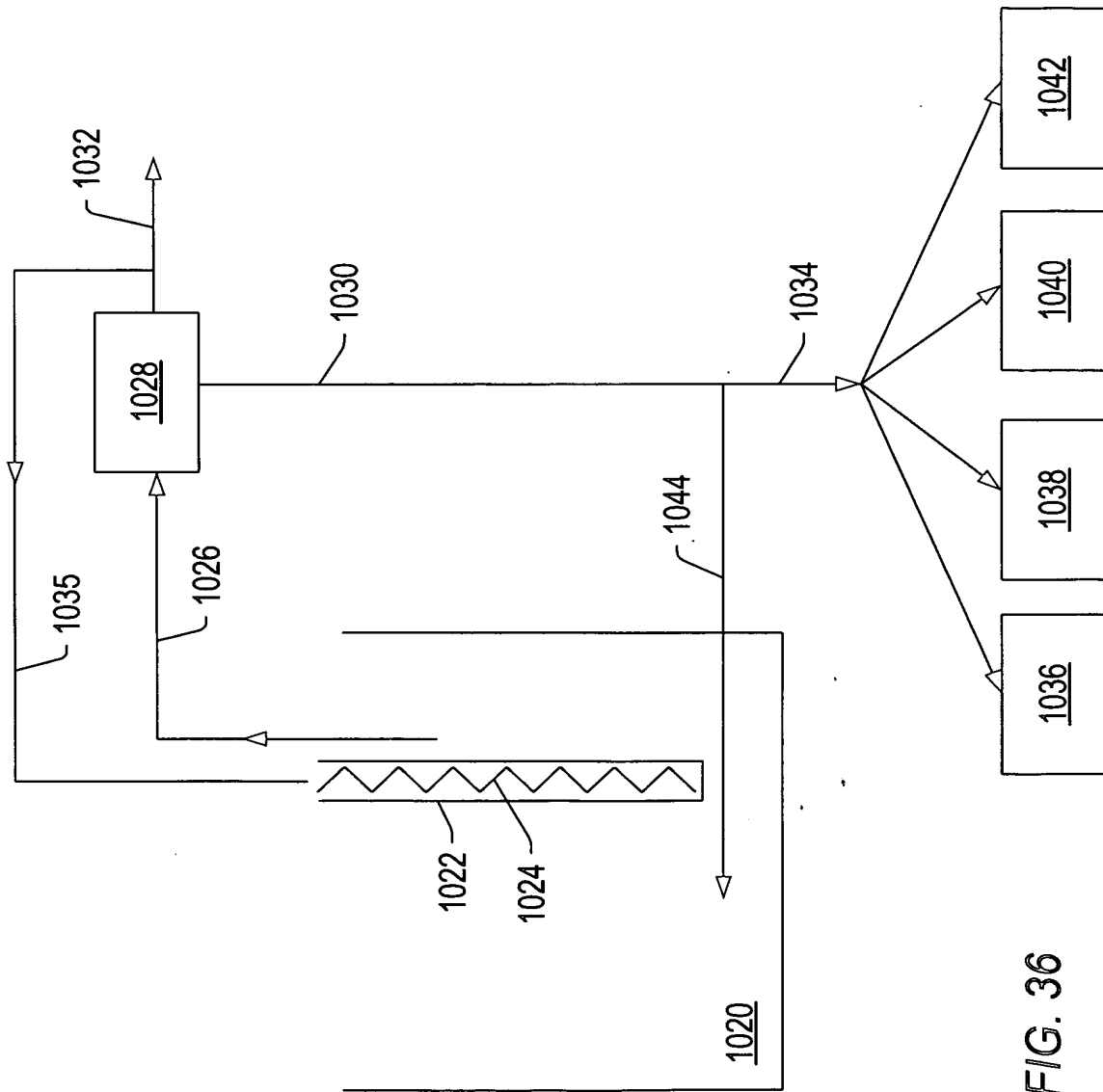


FIG. 36

2

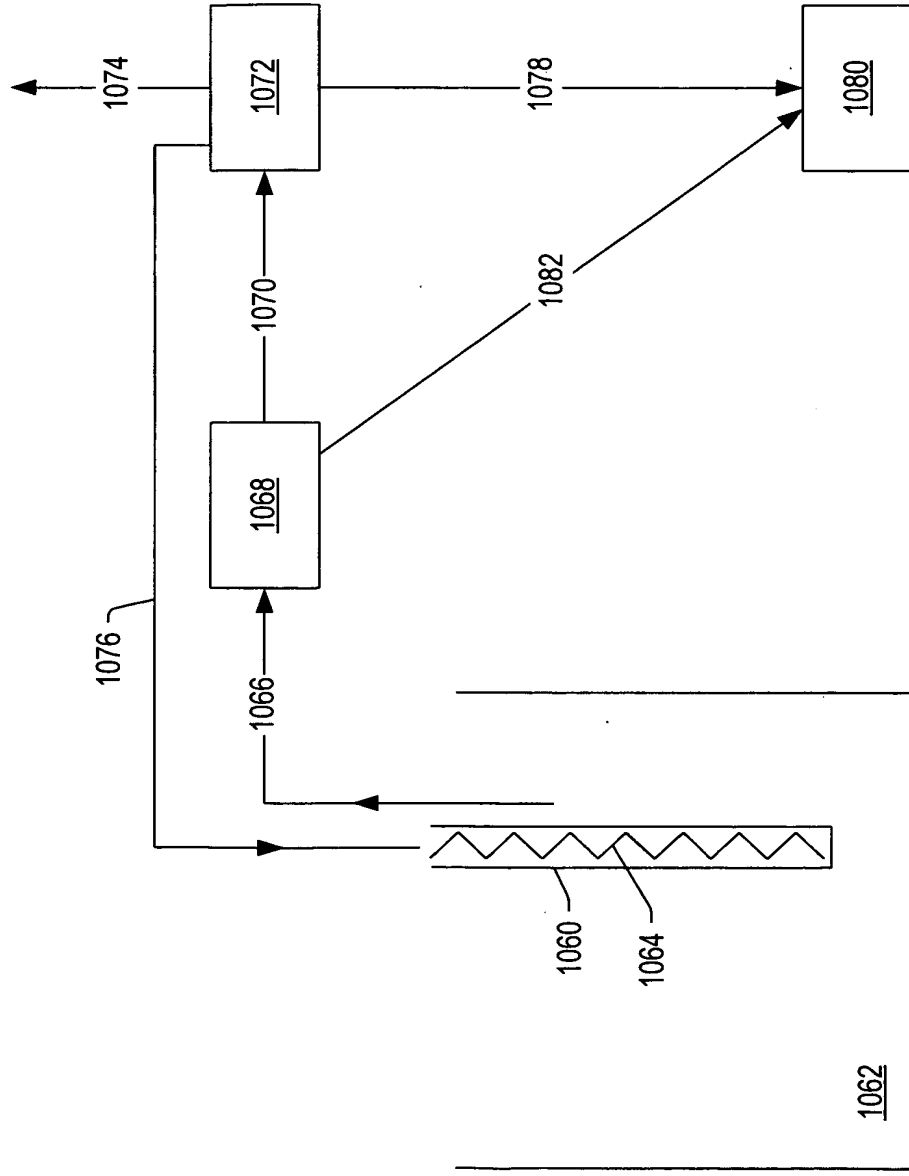


FIG. 37

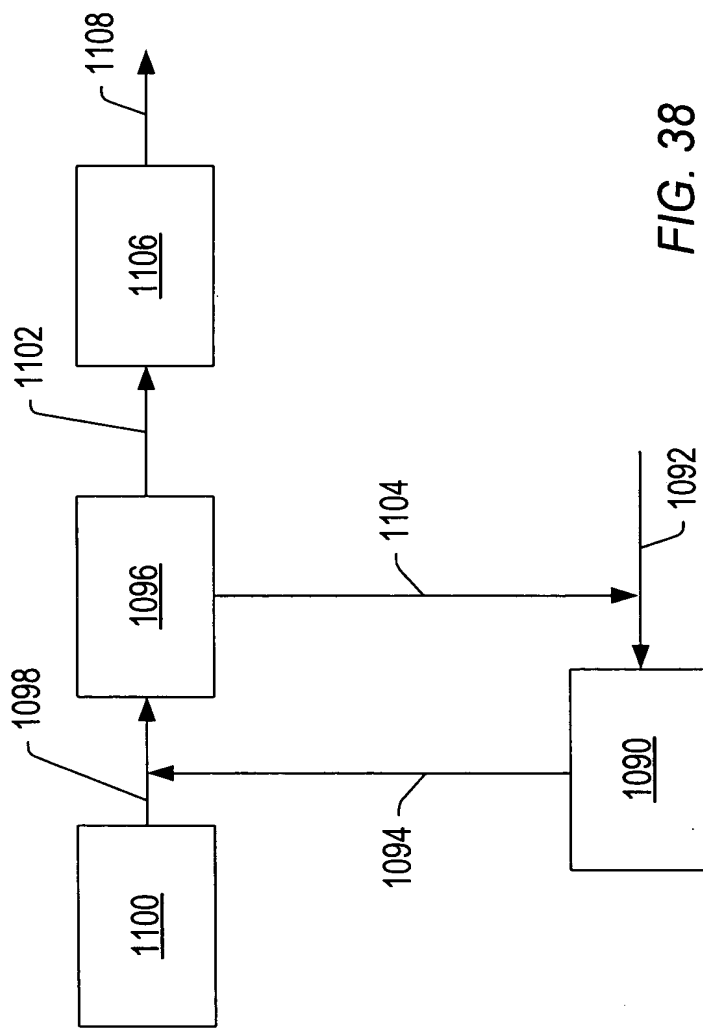


FIG. 38

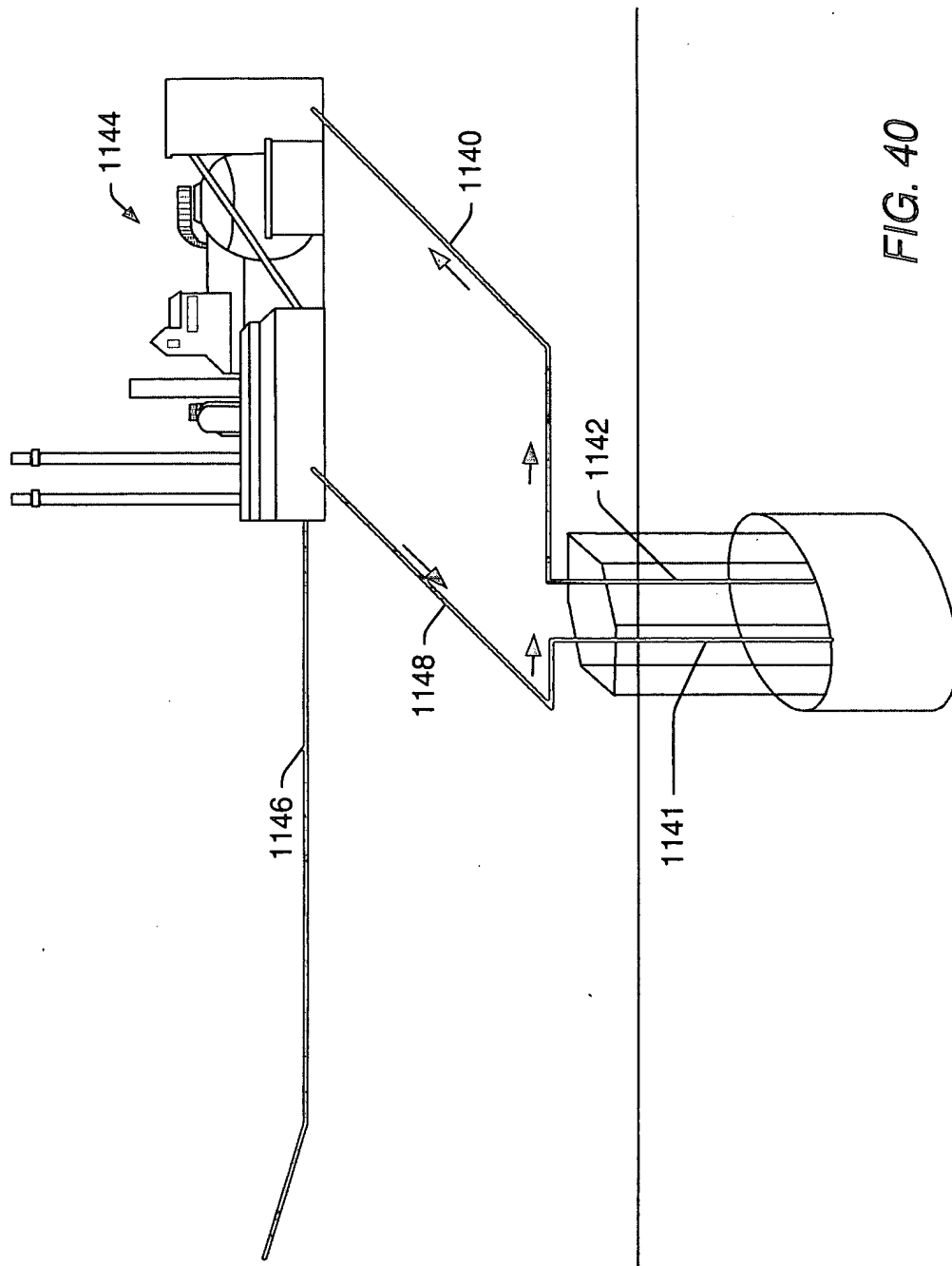


FIG. 40

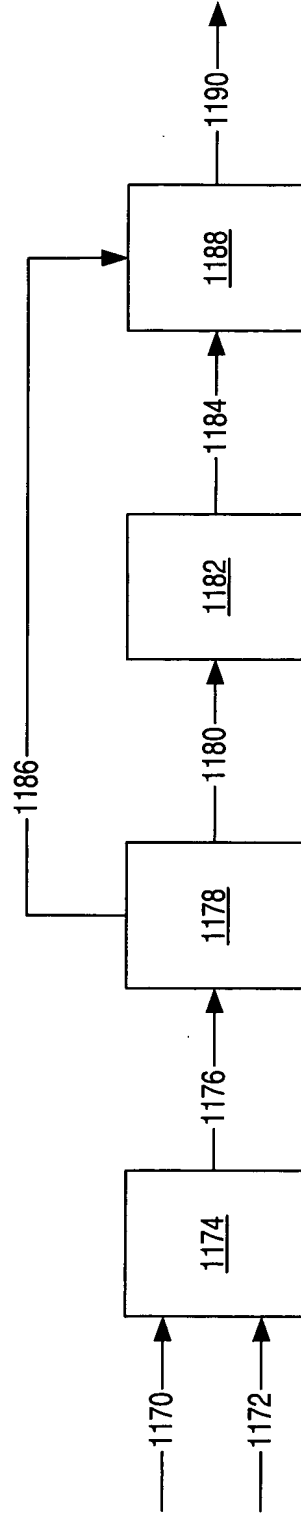


FIG. 41

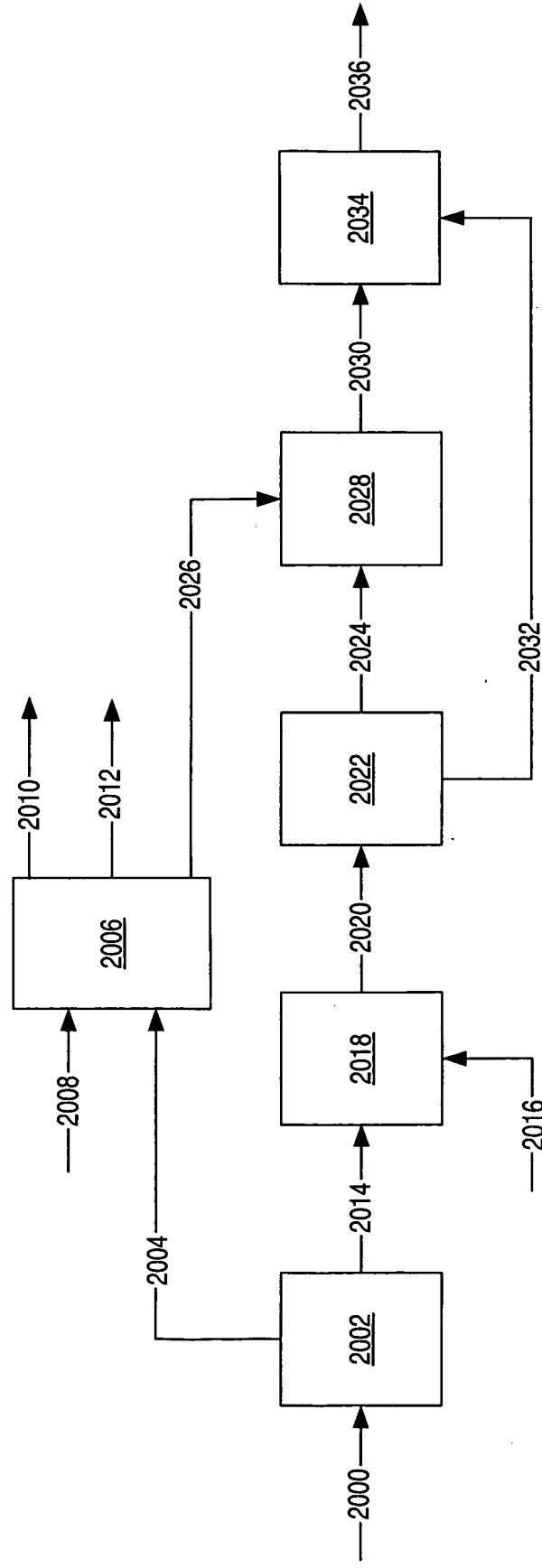


FIG. 42

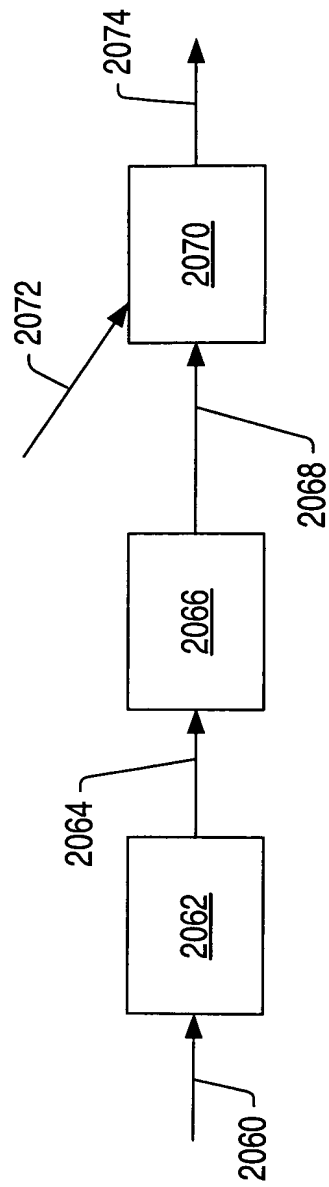


FIG. 43

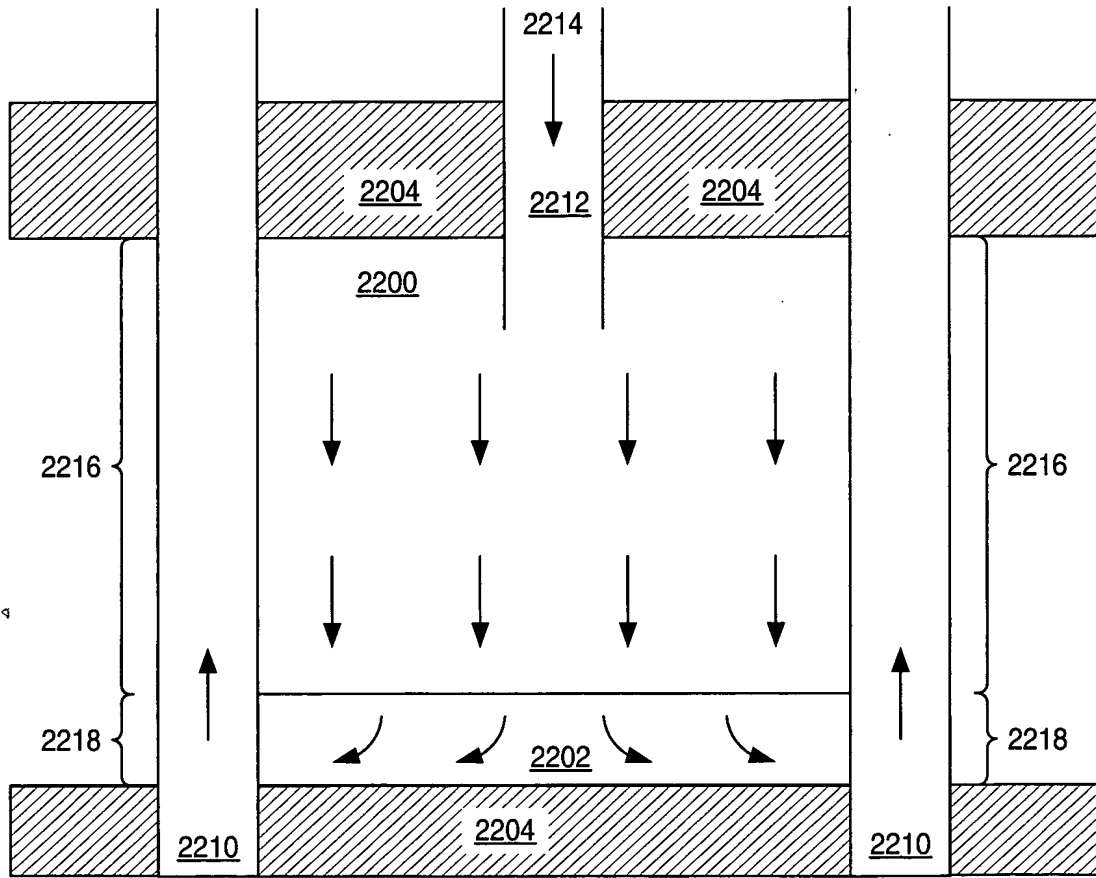


FIG. 44

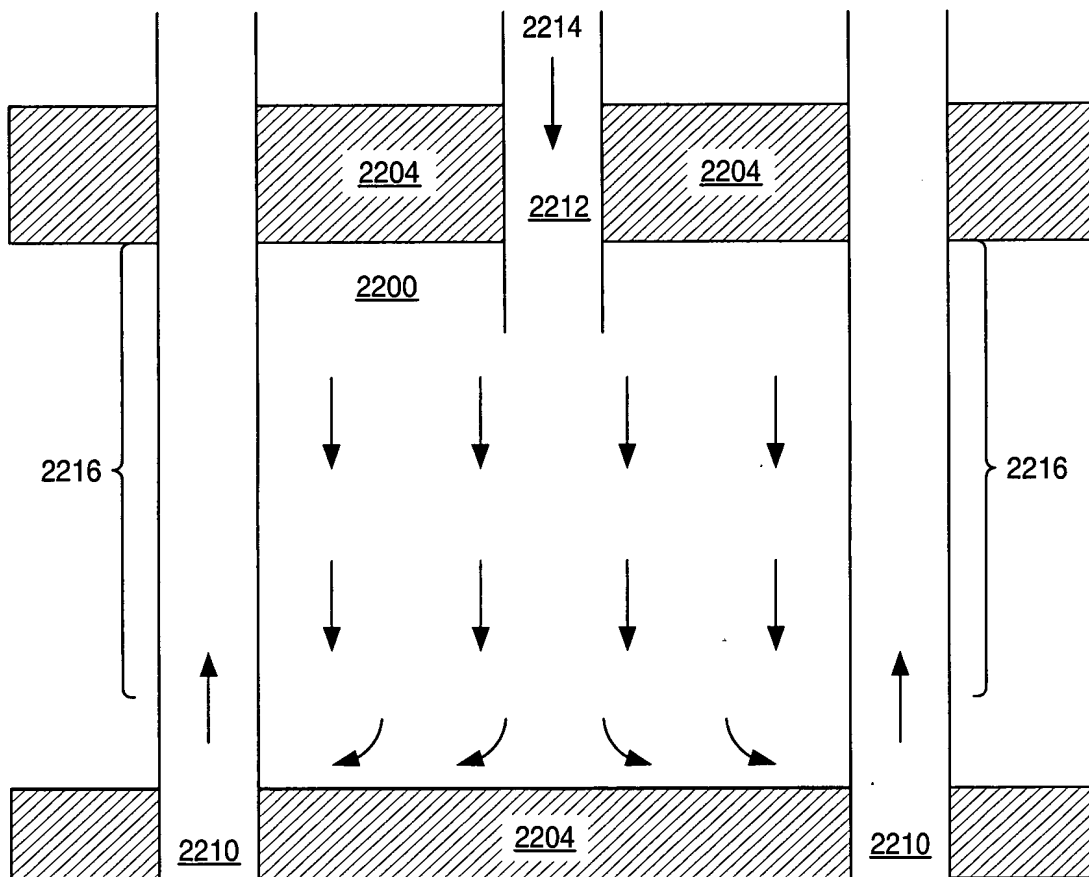


FIG. 45

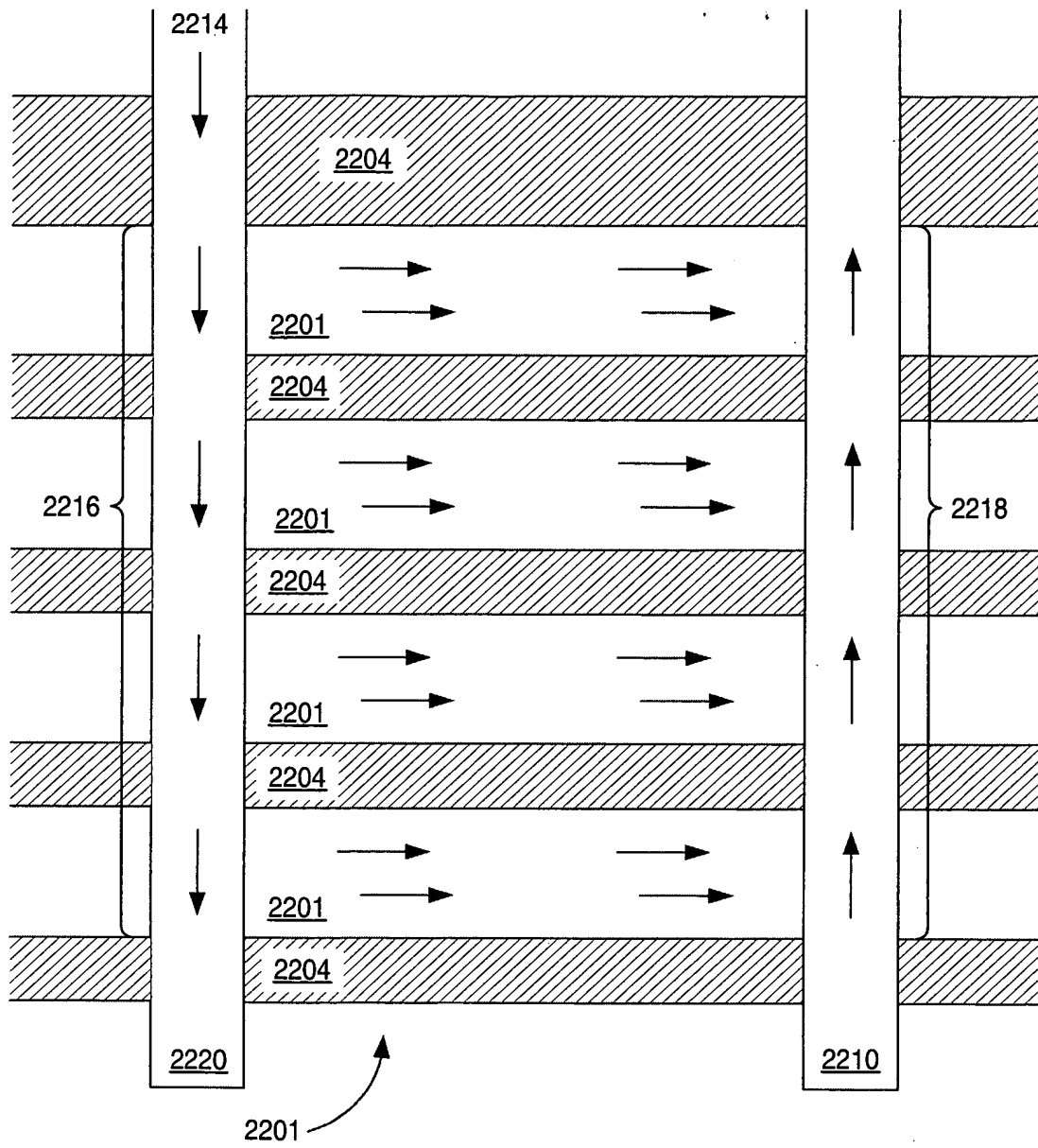


FIG. 46

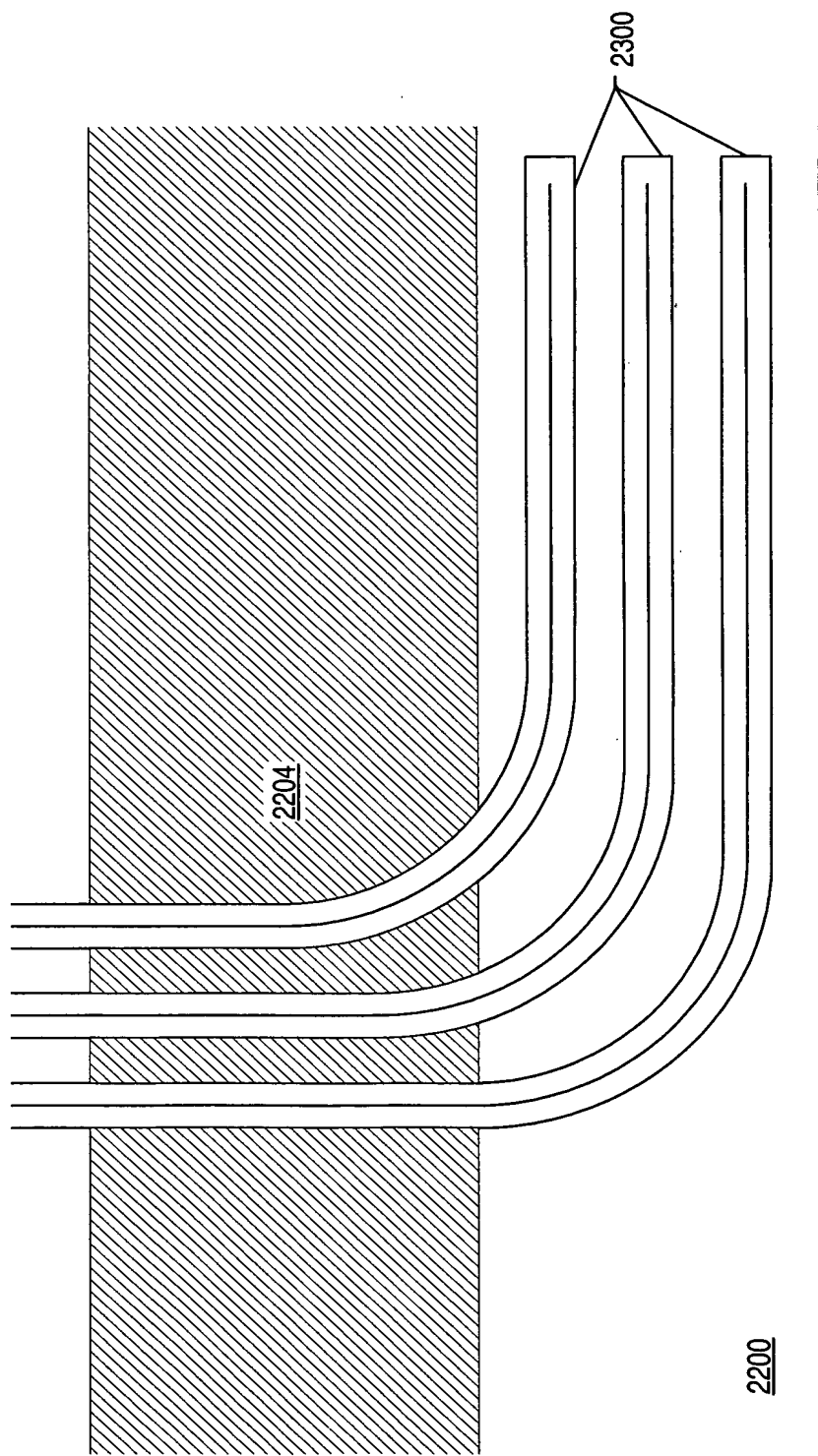


FIG. 47

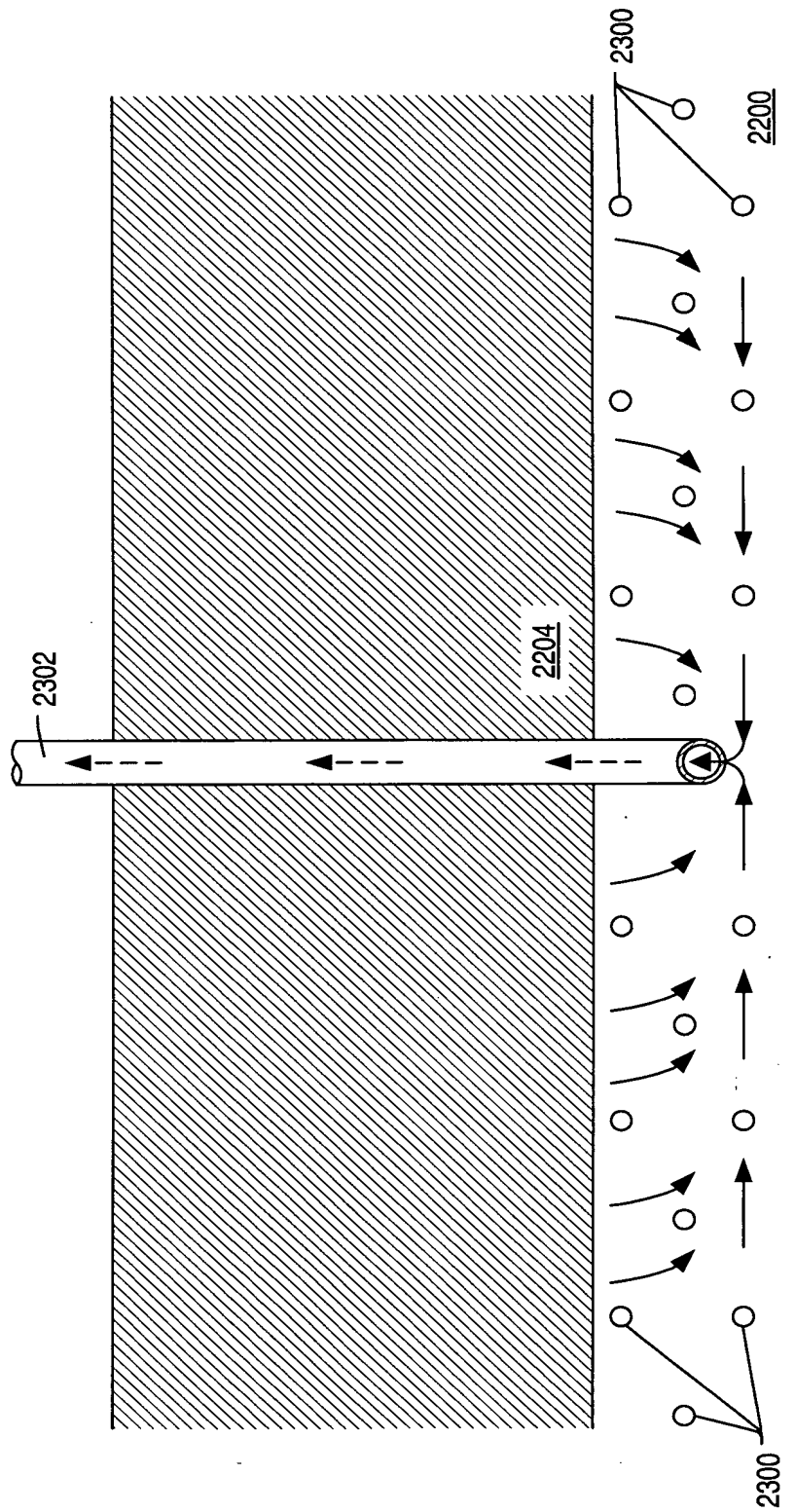


FIG. 48

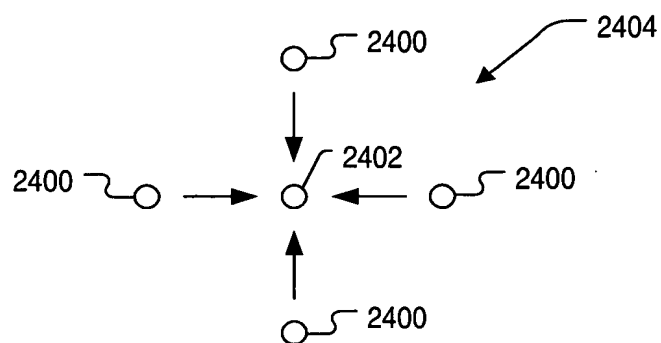


FIG. 49

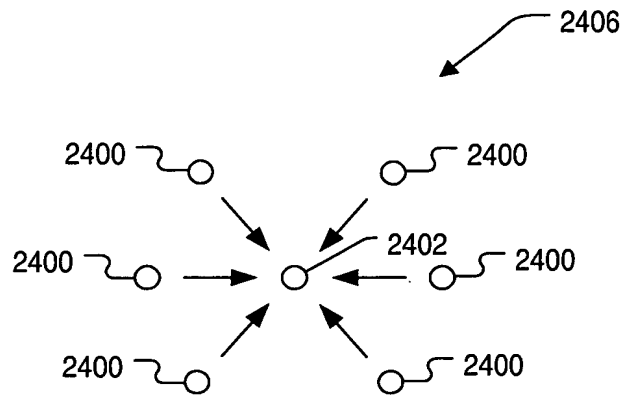


FIG. 50

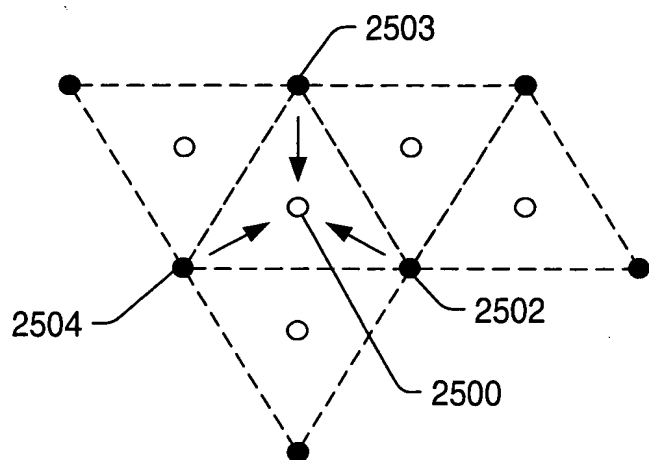


FIG. 51

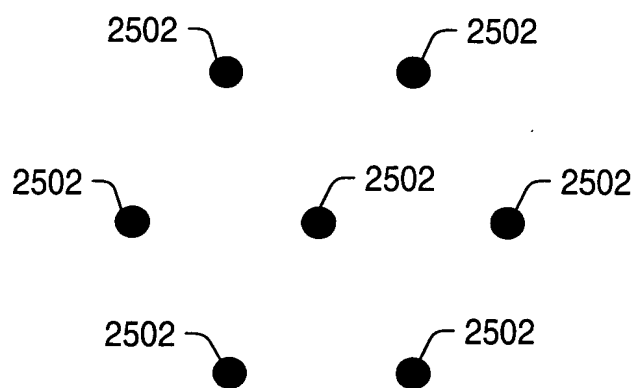


FIG. 52

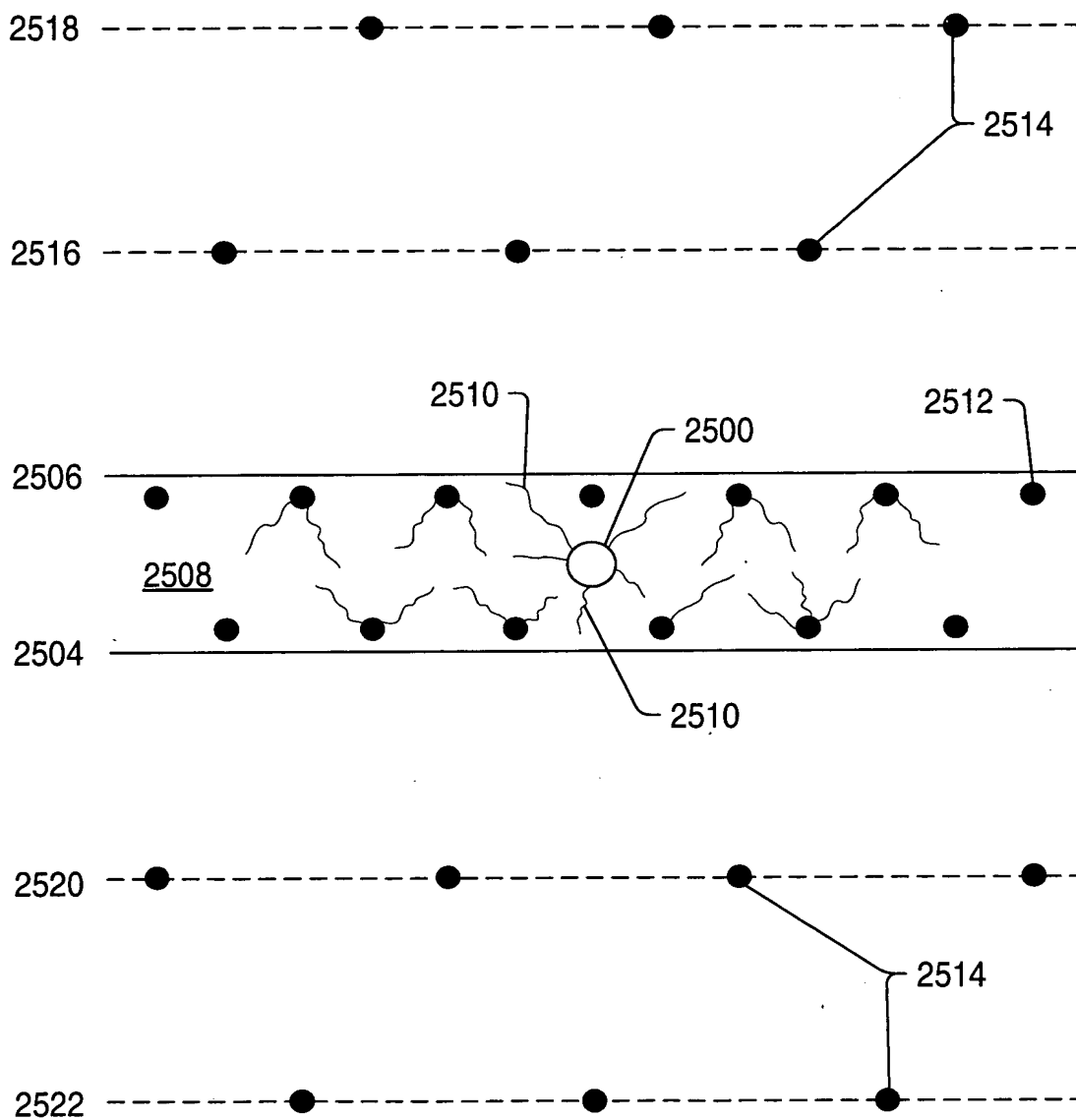


FIG. 53

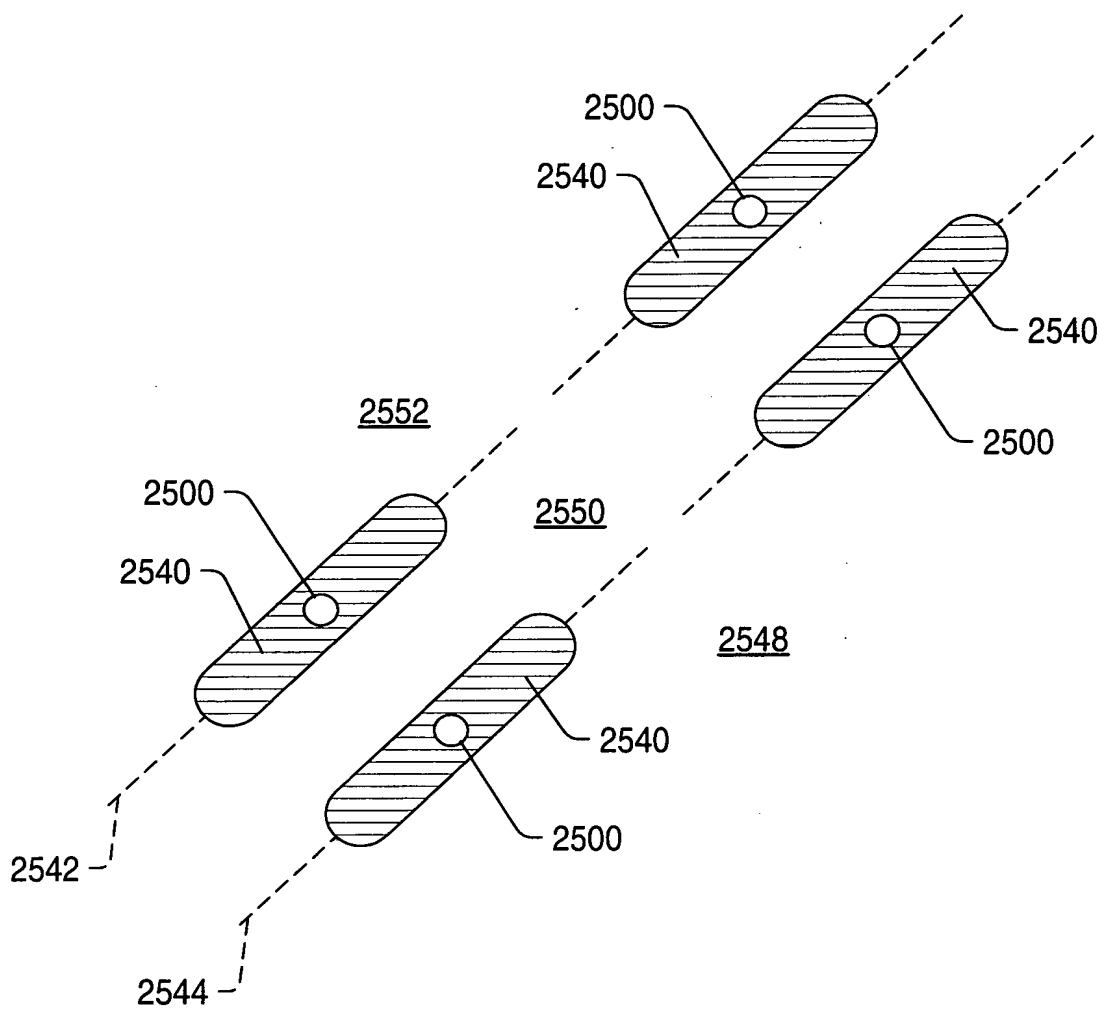


FIG. 54

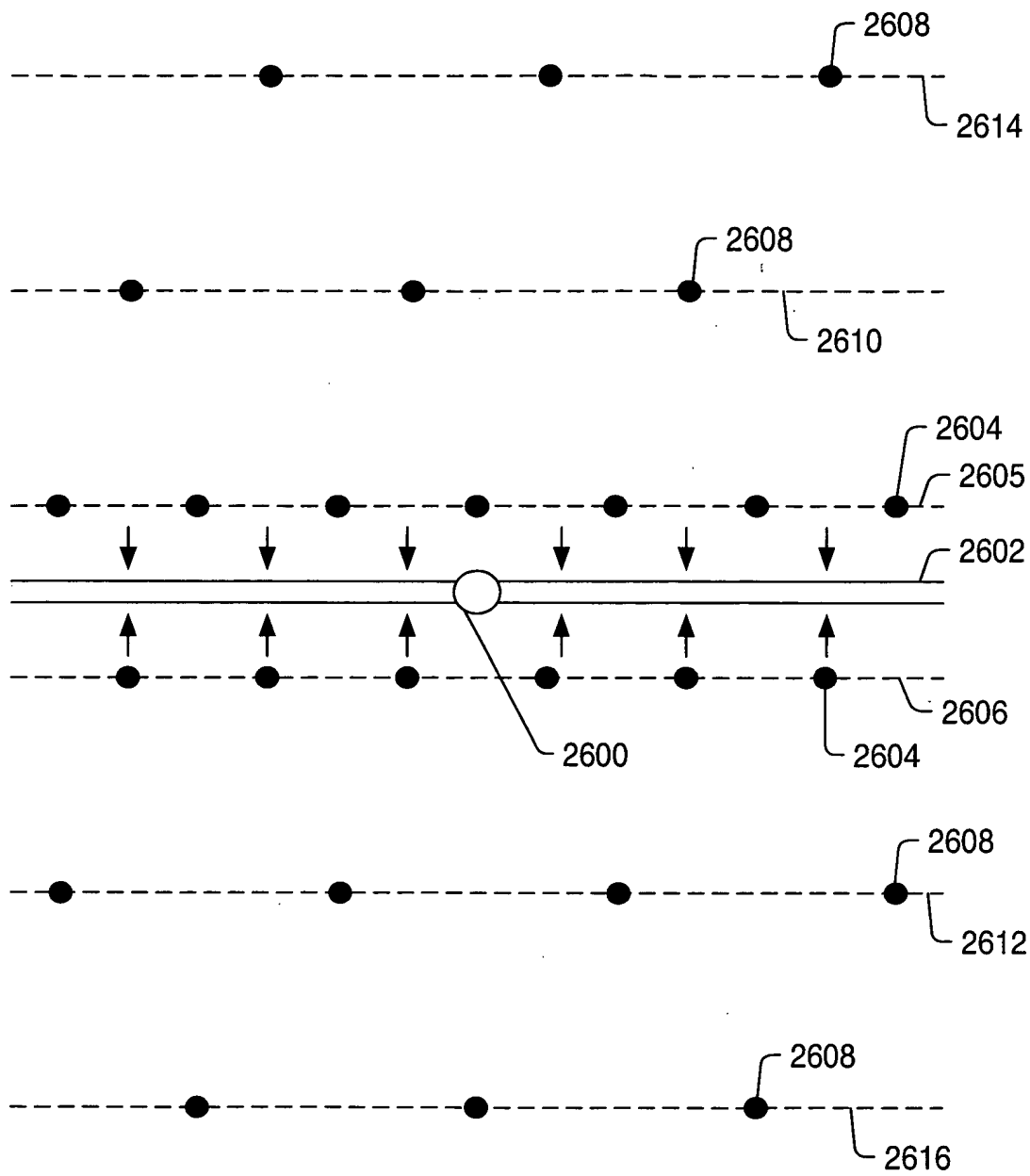


FIG. 55

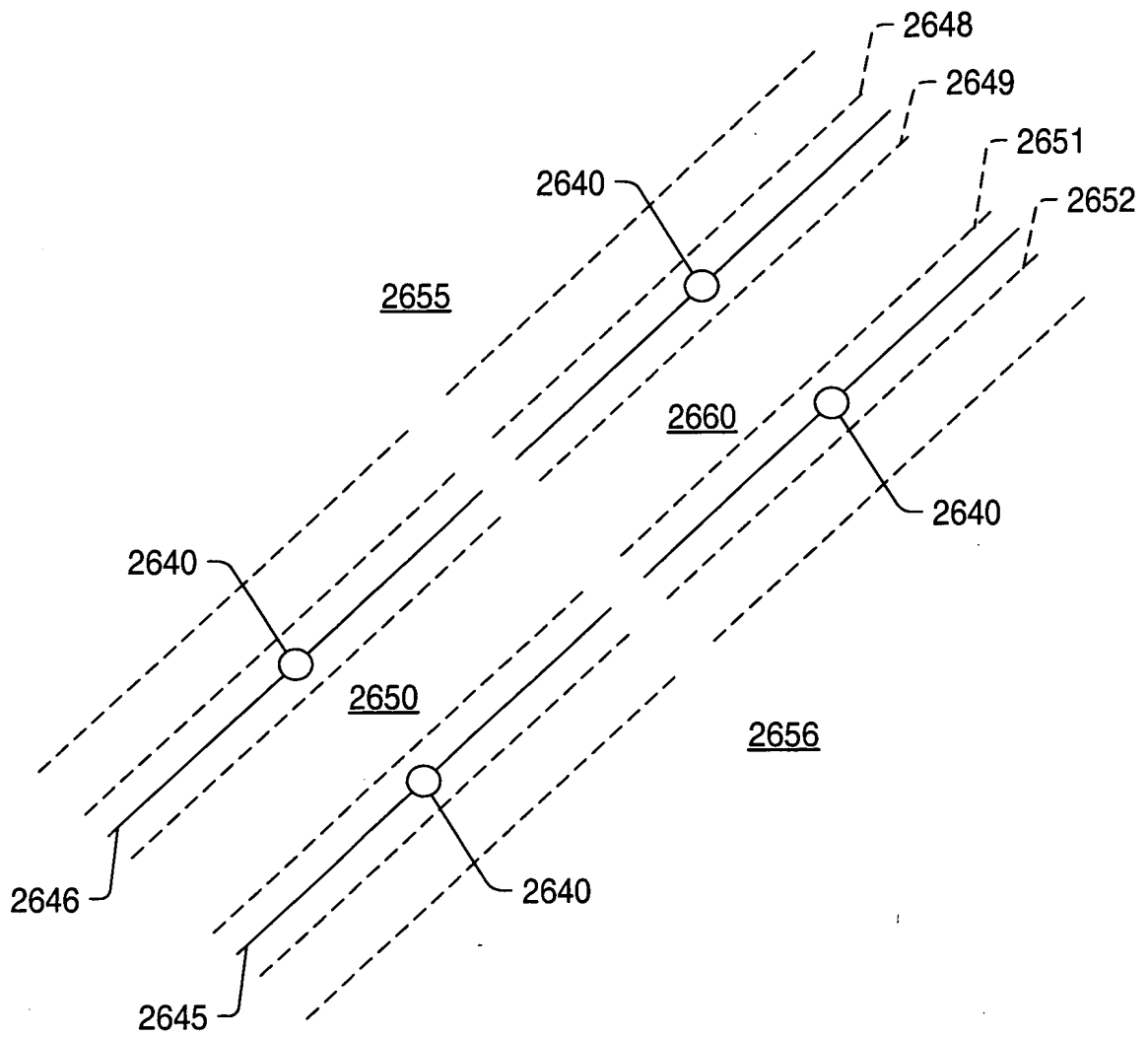


FIG. 56

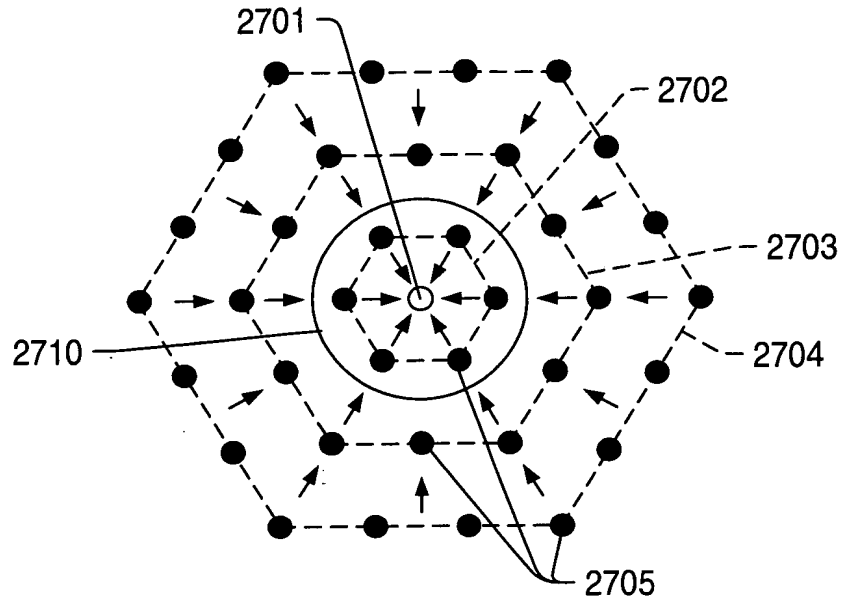


FIG. 57

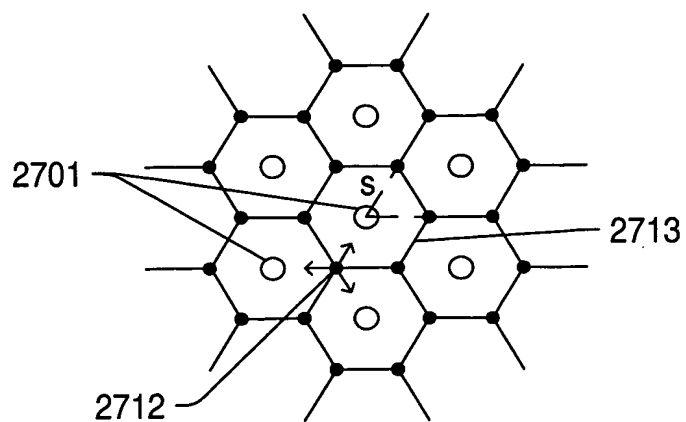


FIG. 58

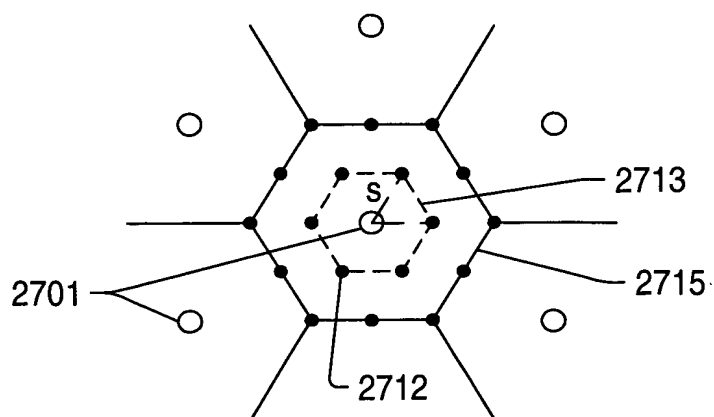


FIG. 59

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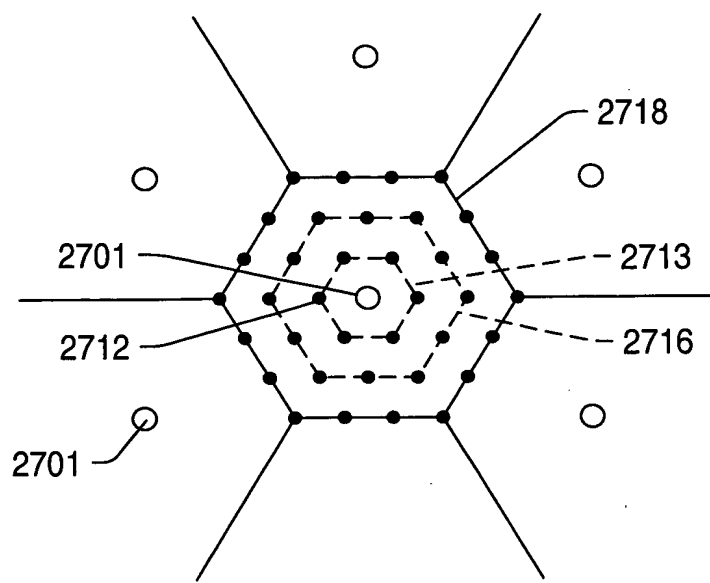


FIG. 60

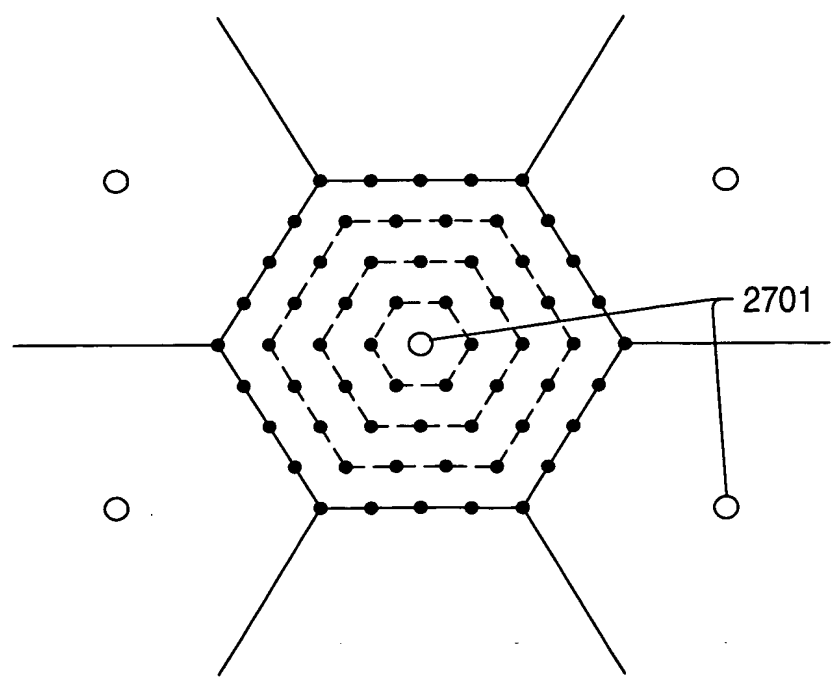


FIG. 61

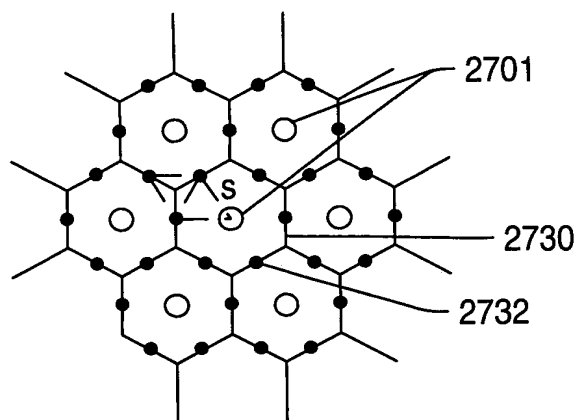


FIG. 62

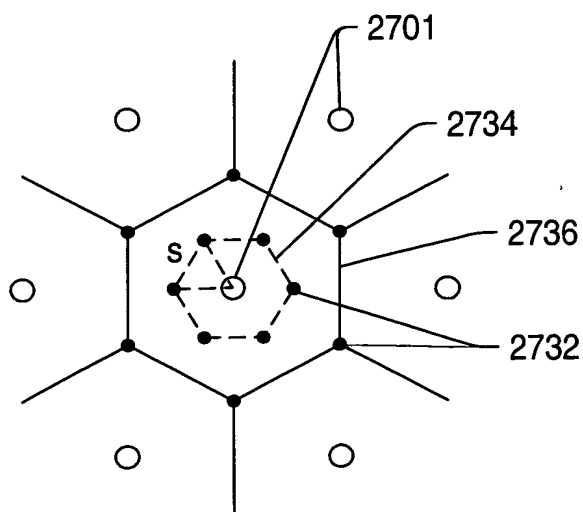


FIG. 63

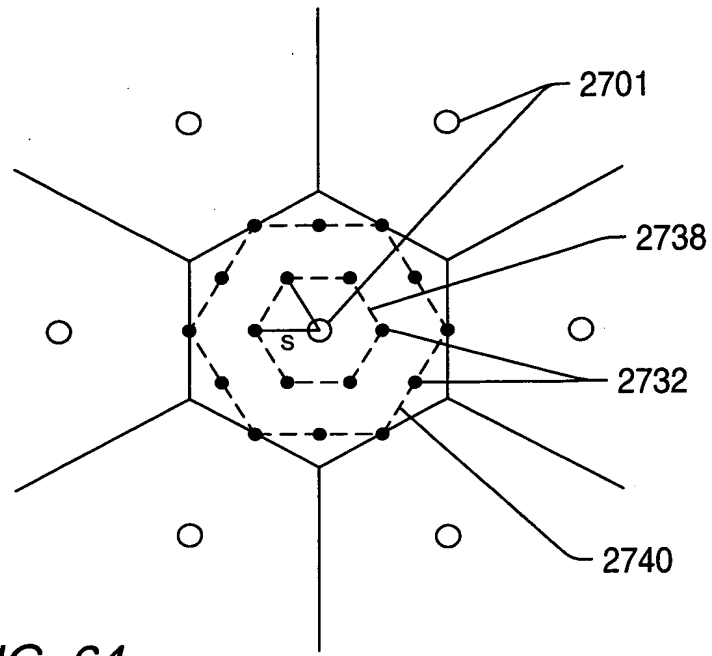


FIG. 64

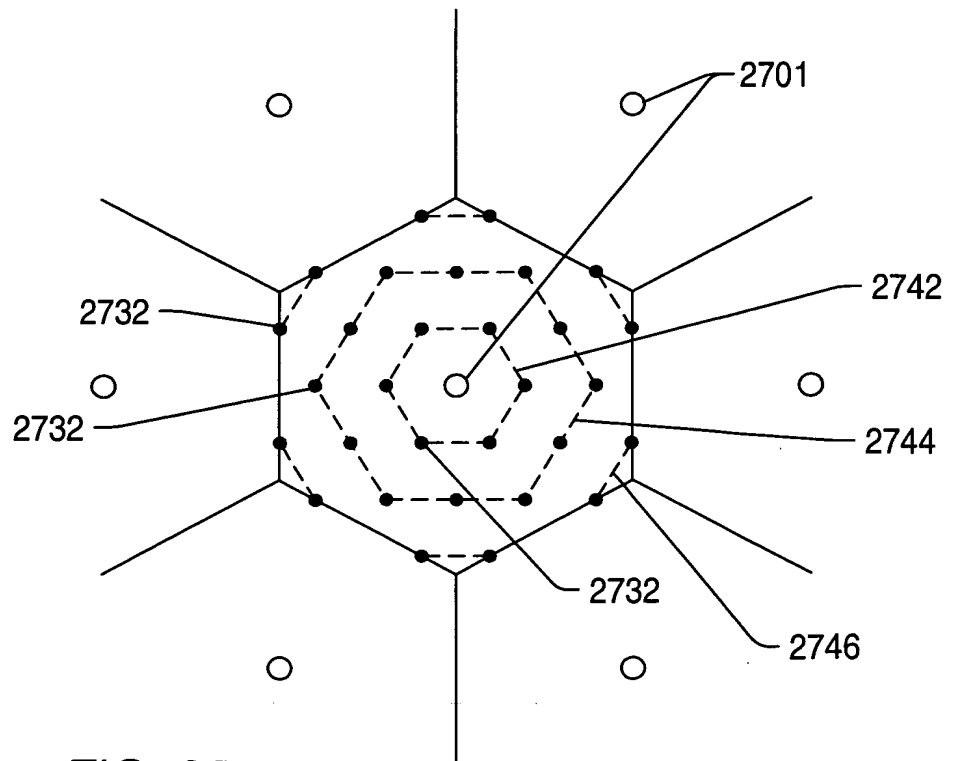


FIG. 65

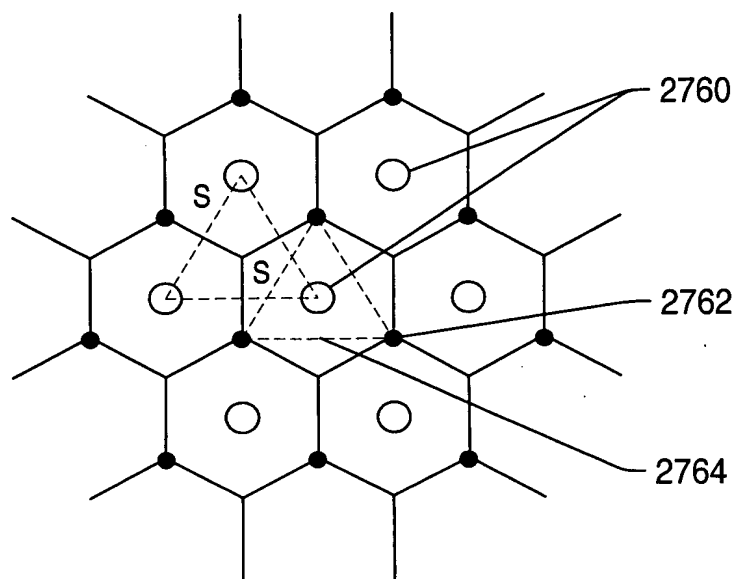


FIG. 66

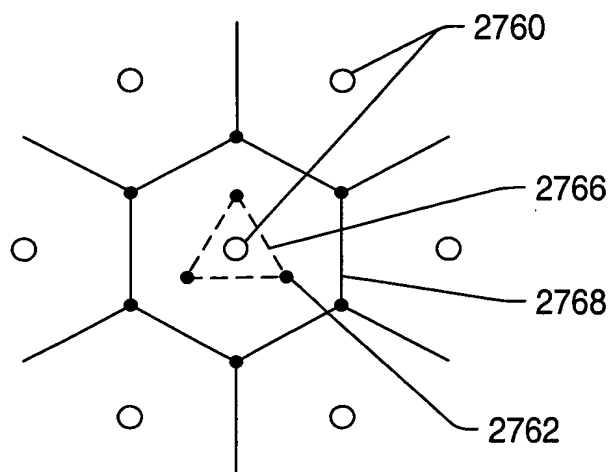


FIG. 67

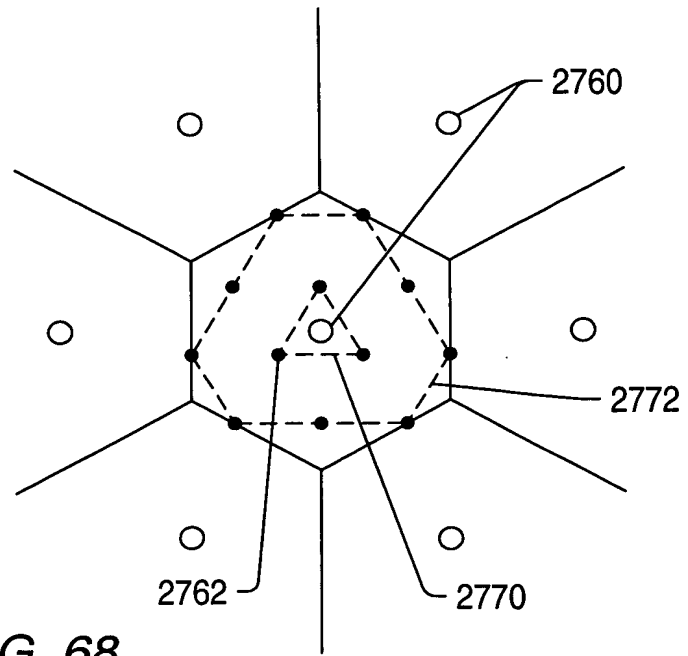


FIG. 68

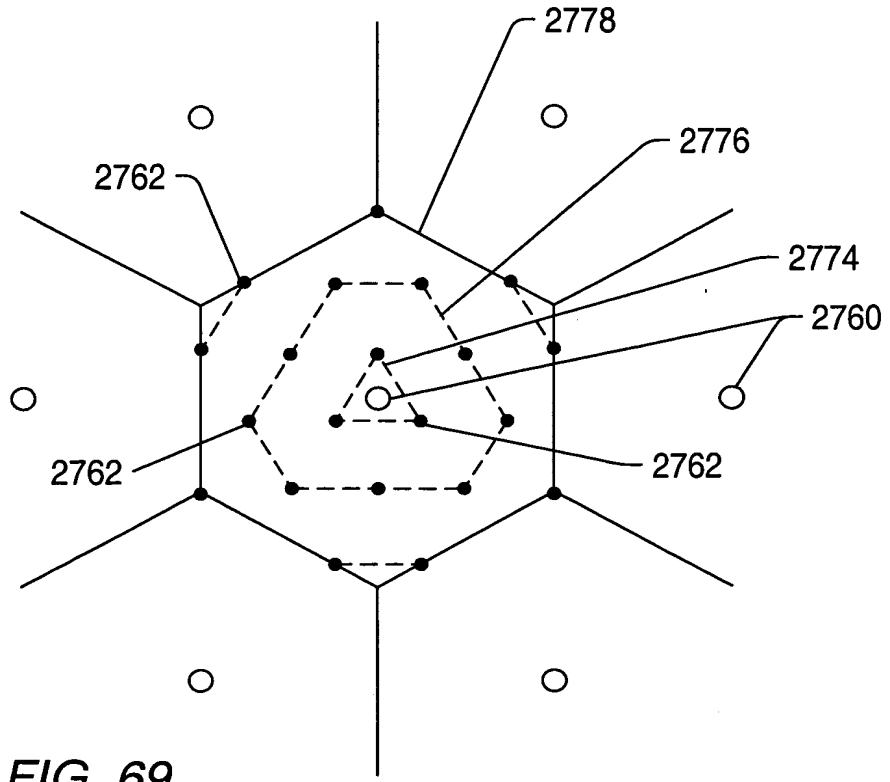


FIG. 69

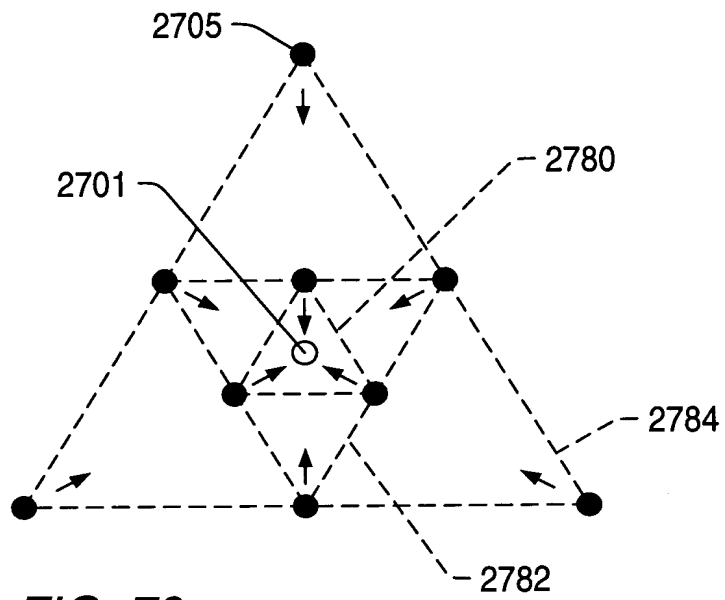


FIG. 70

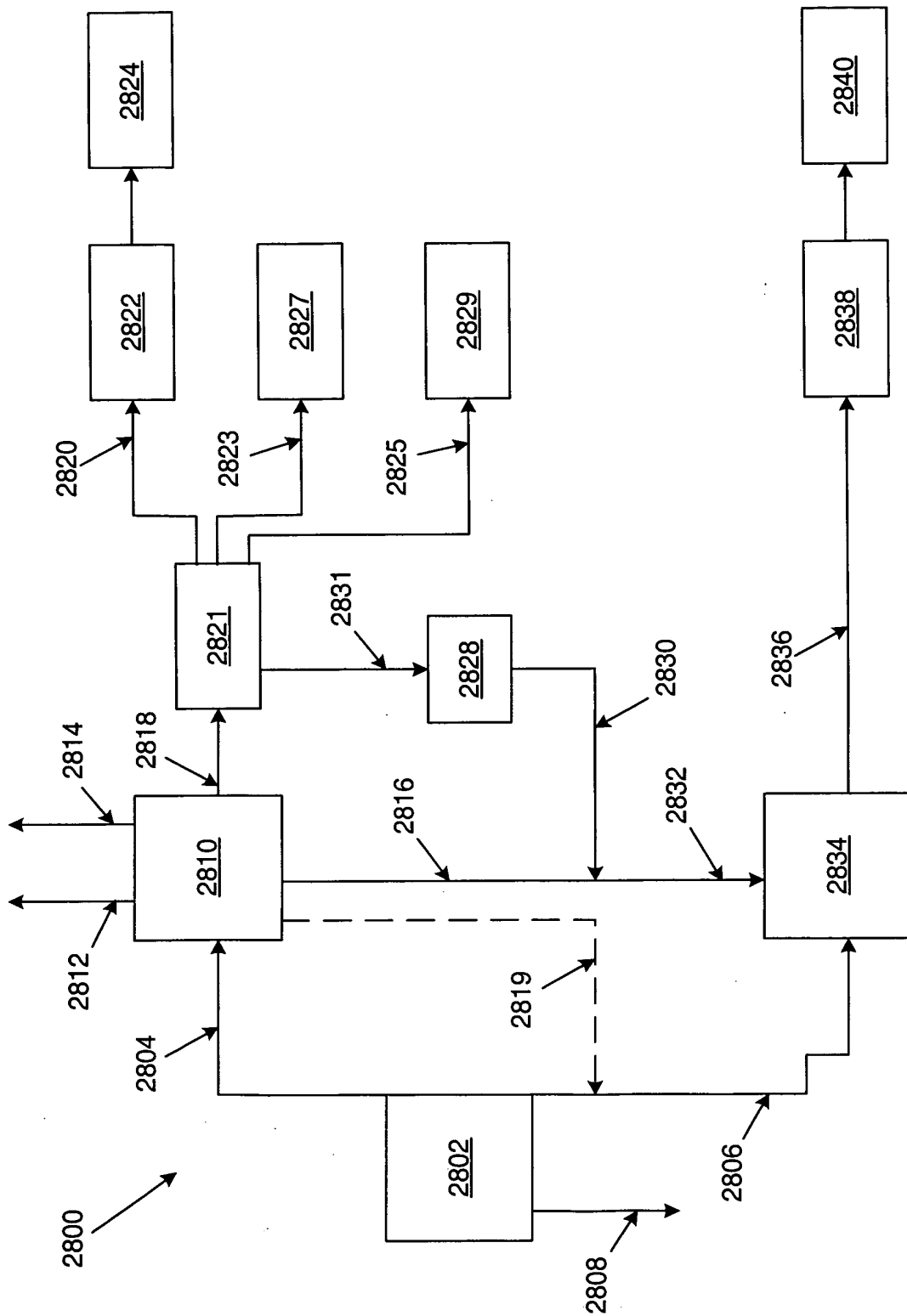


Fig. 71

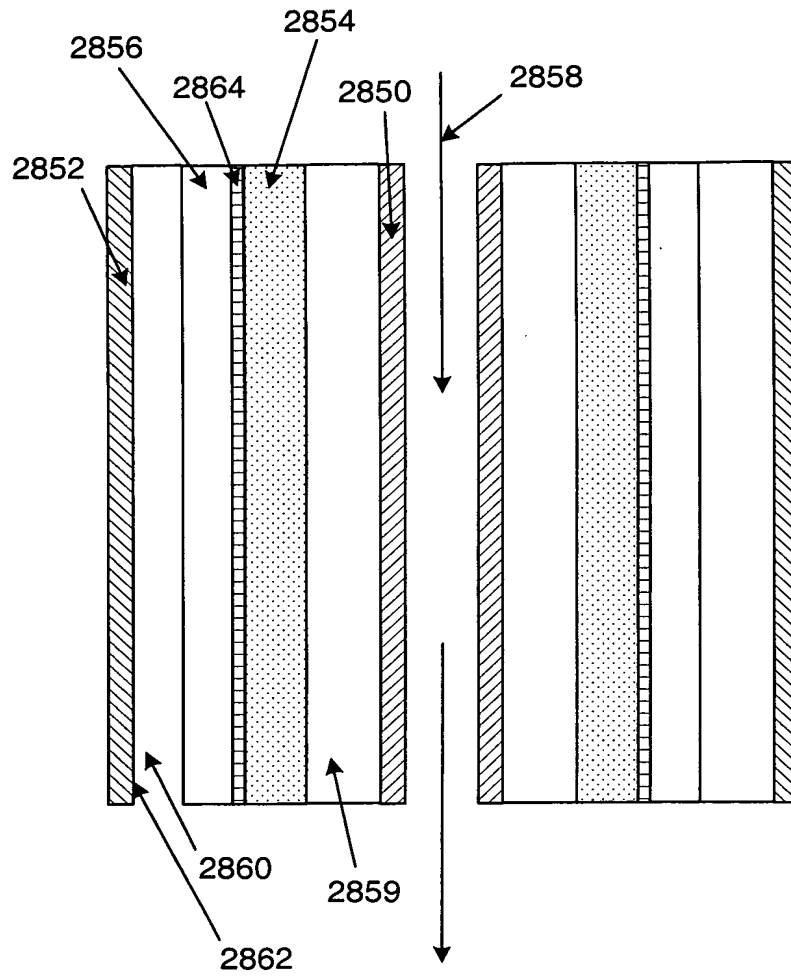


Fig. 72

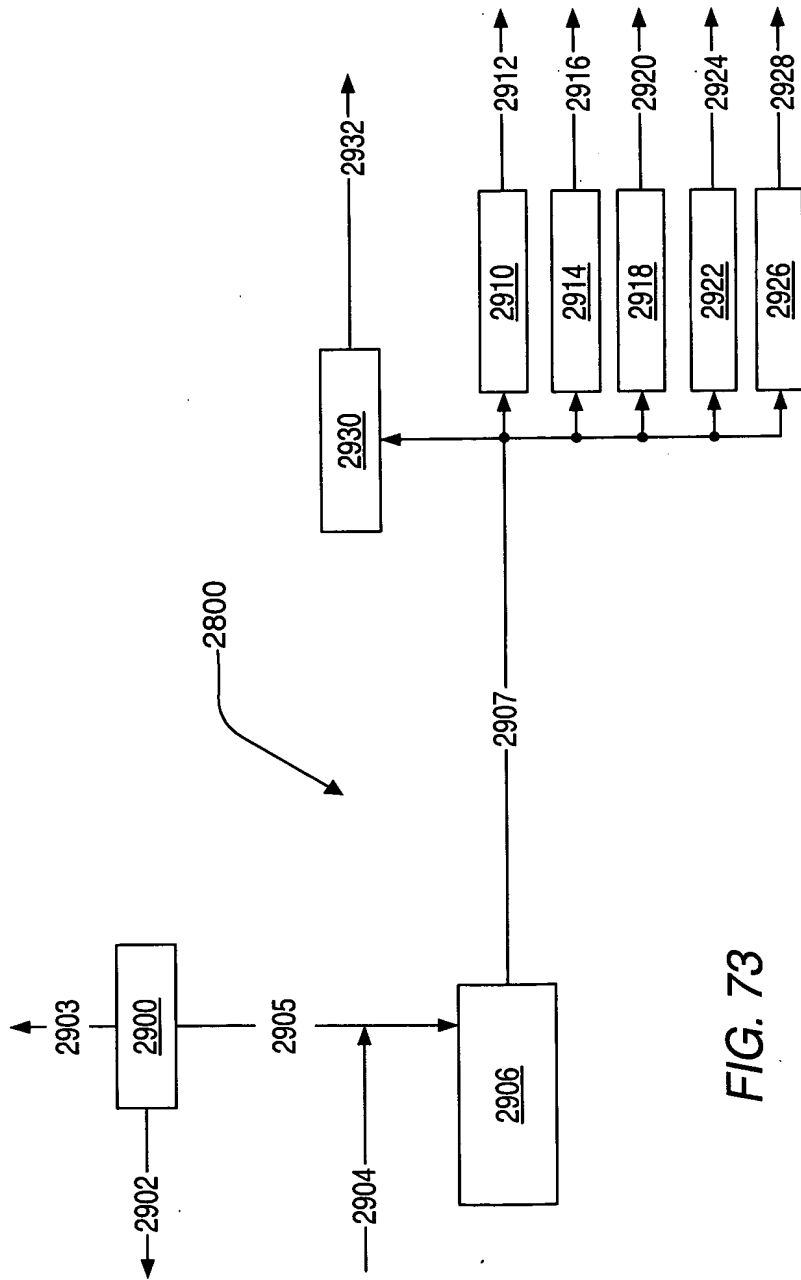


FIG. 73

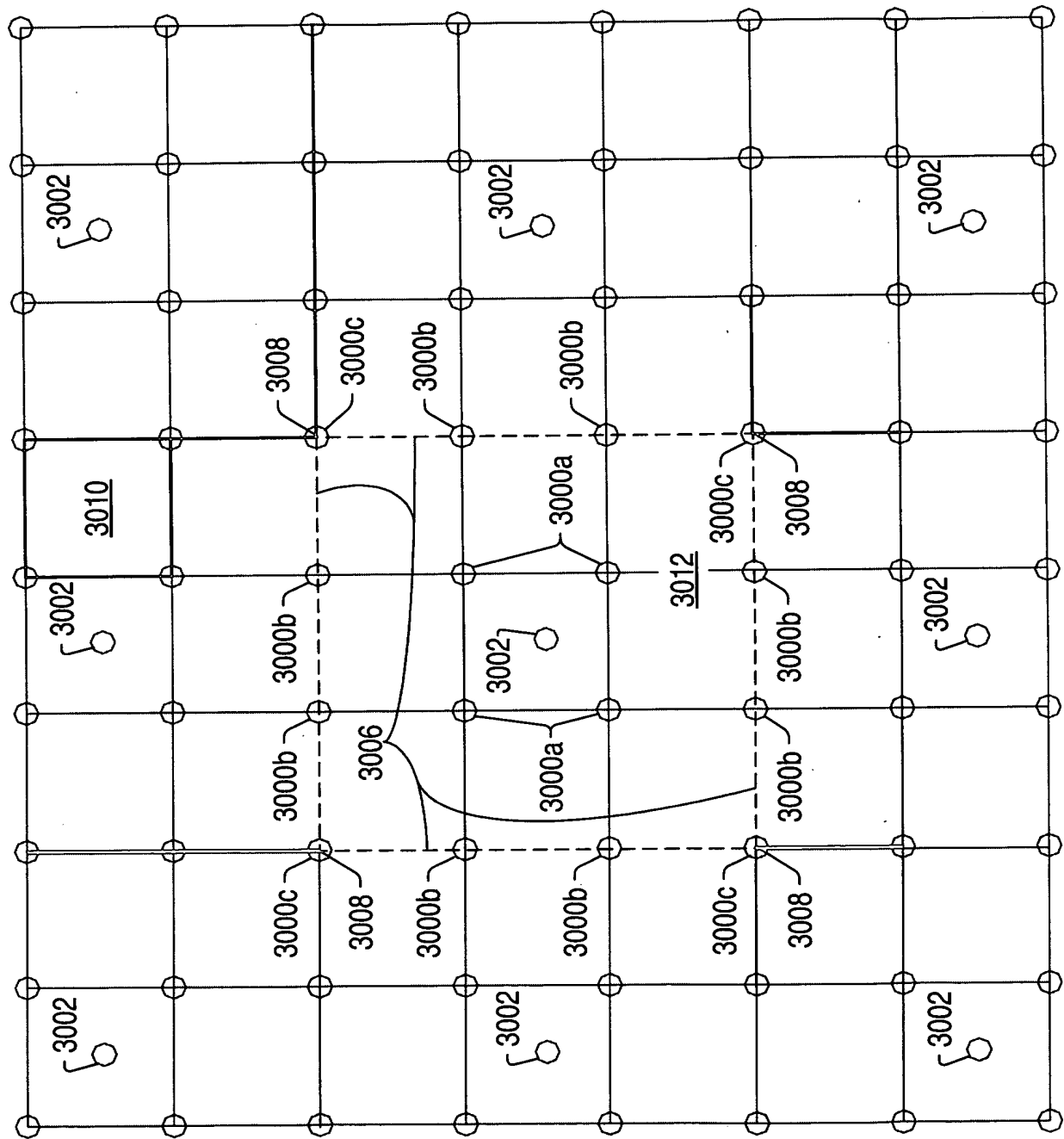


FIG. 74

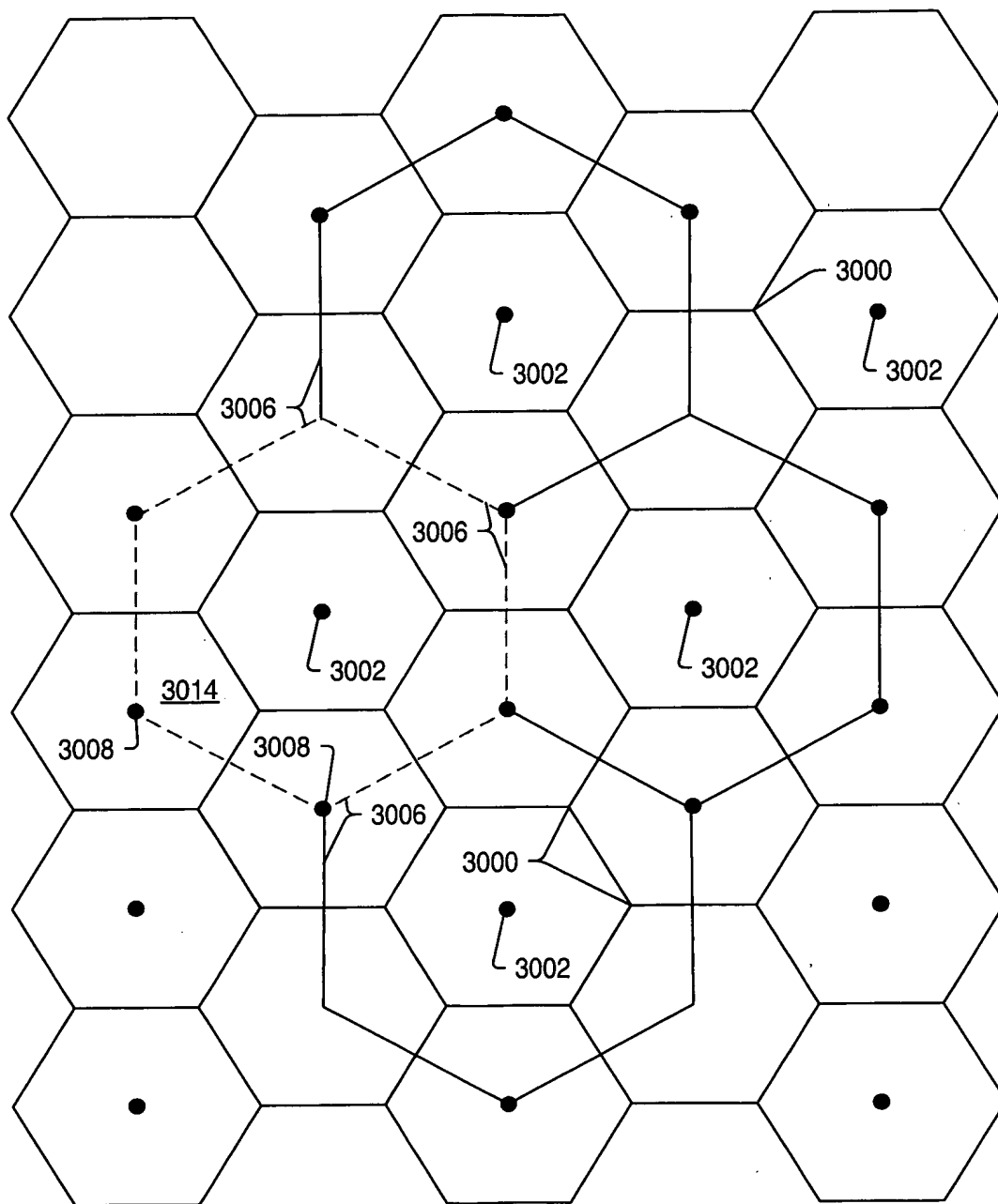


FIG. 75

FIG. 76

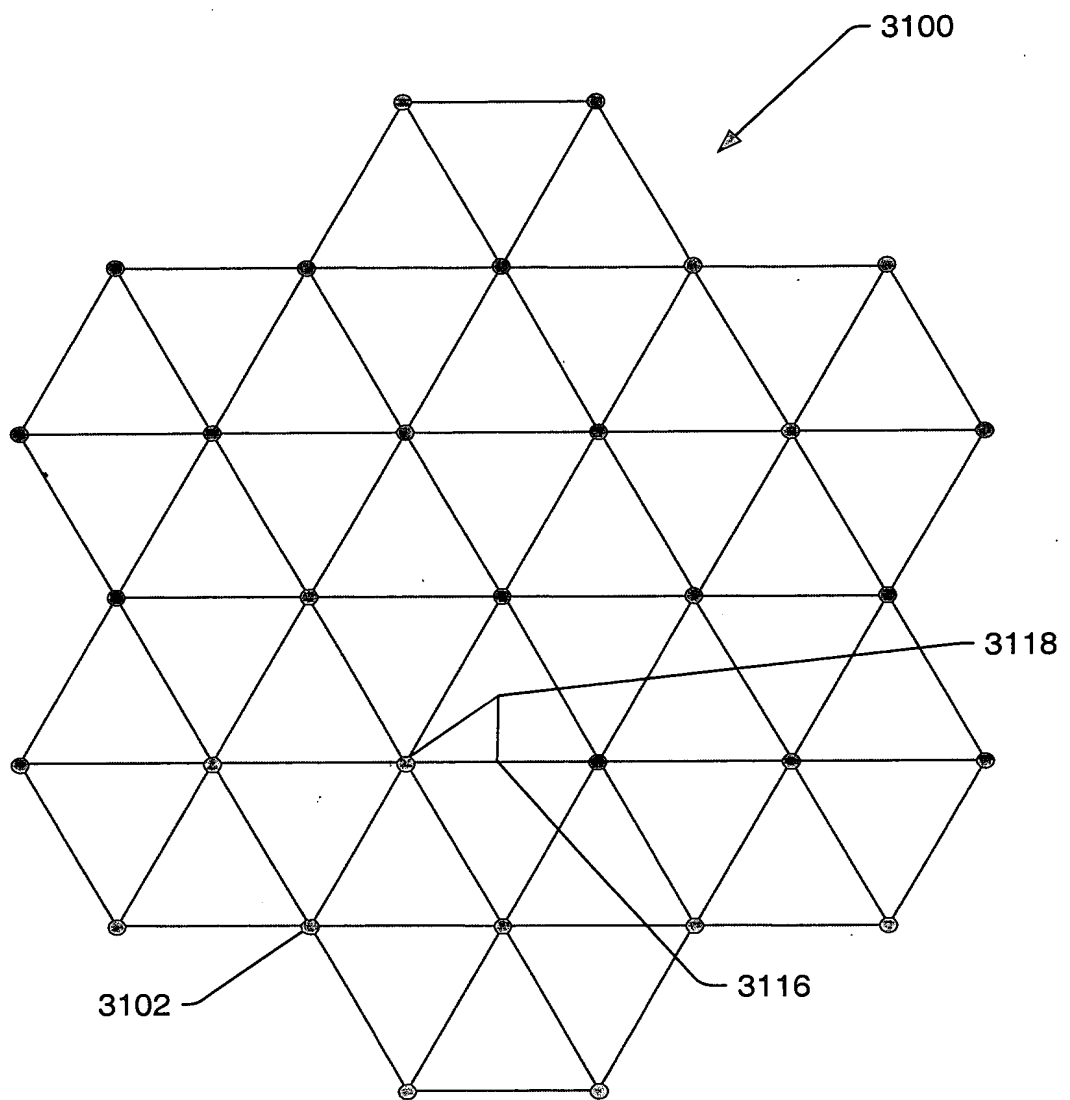


FIG. 76

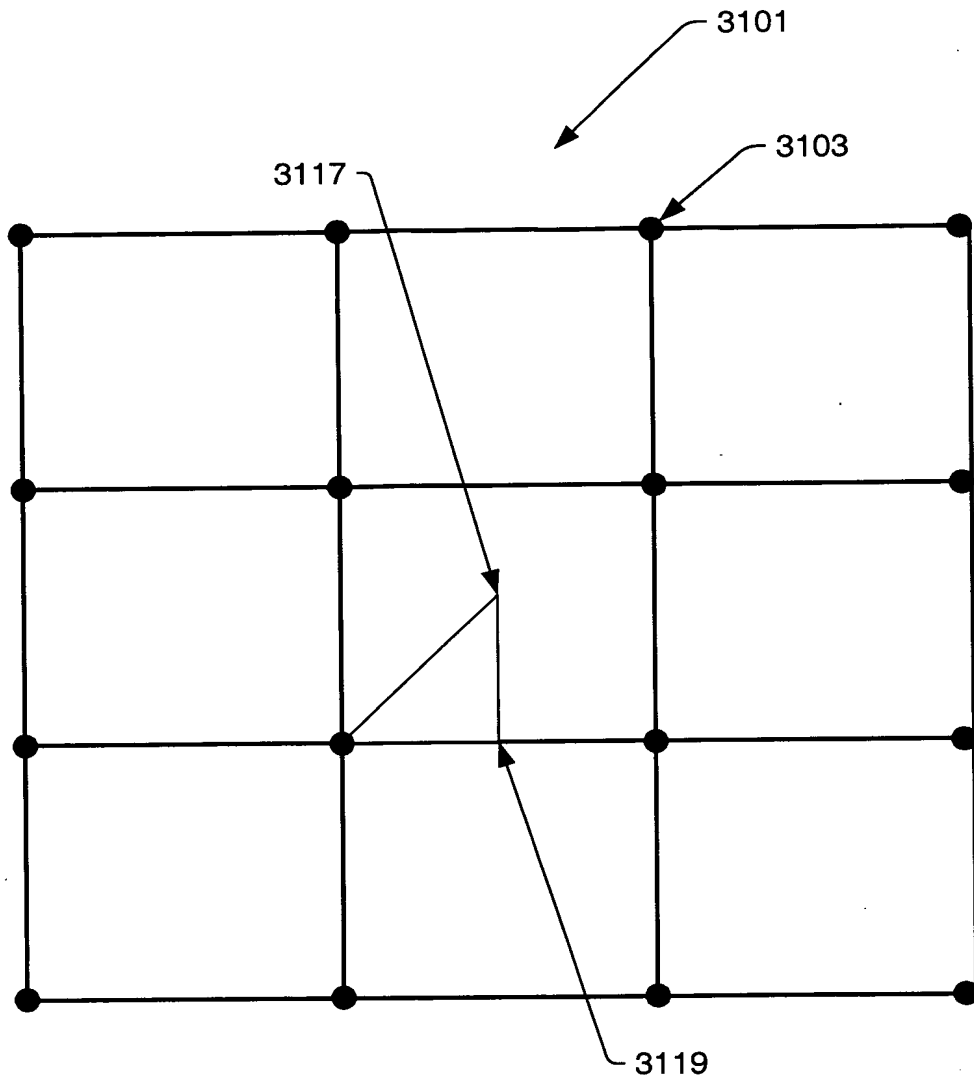


FIG. 76a

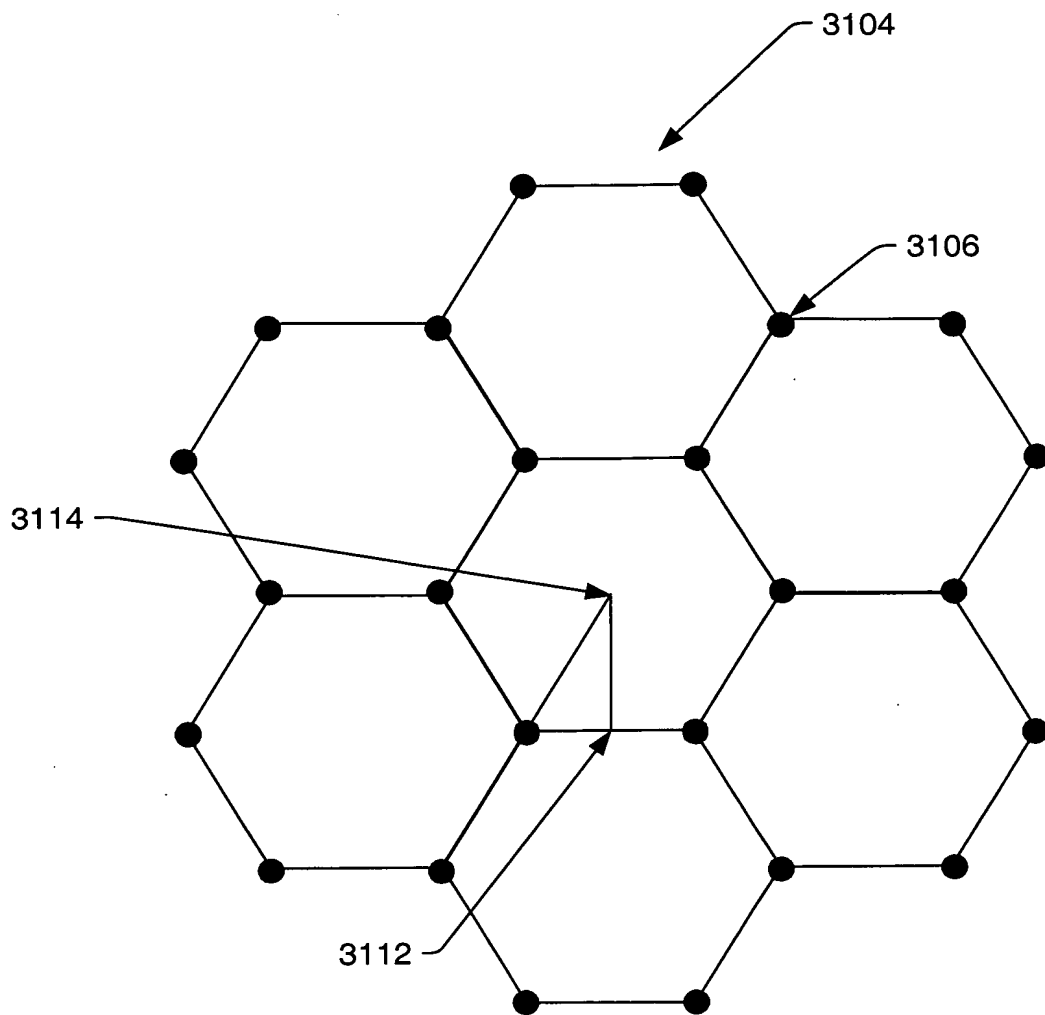


FIG. 77

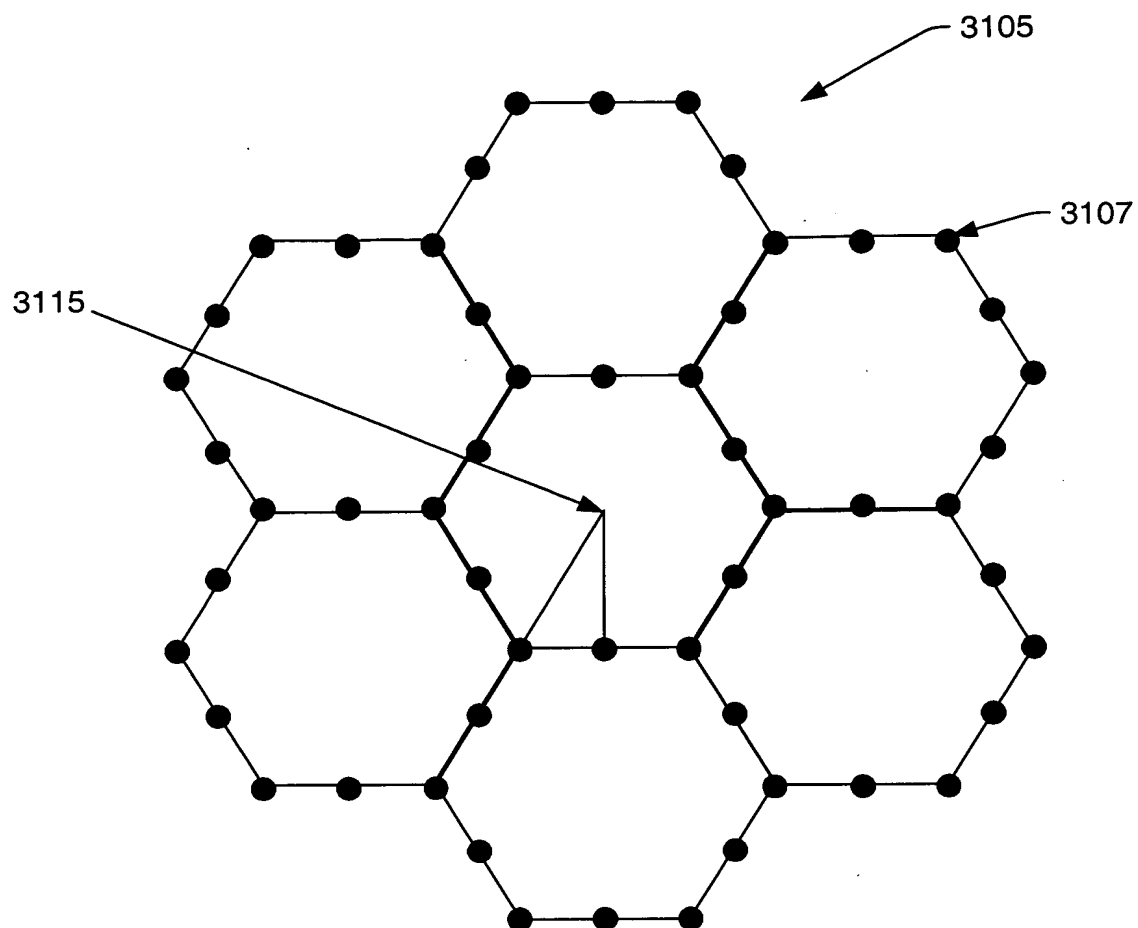


FIG. 77a

3110

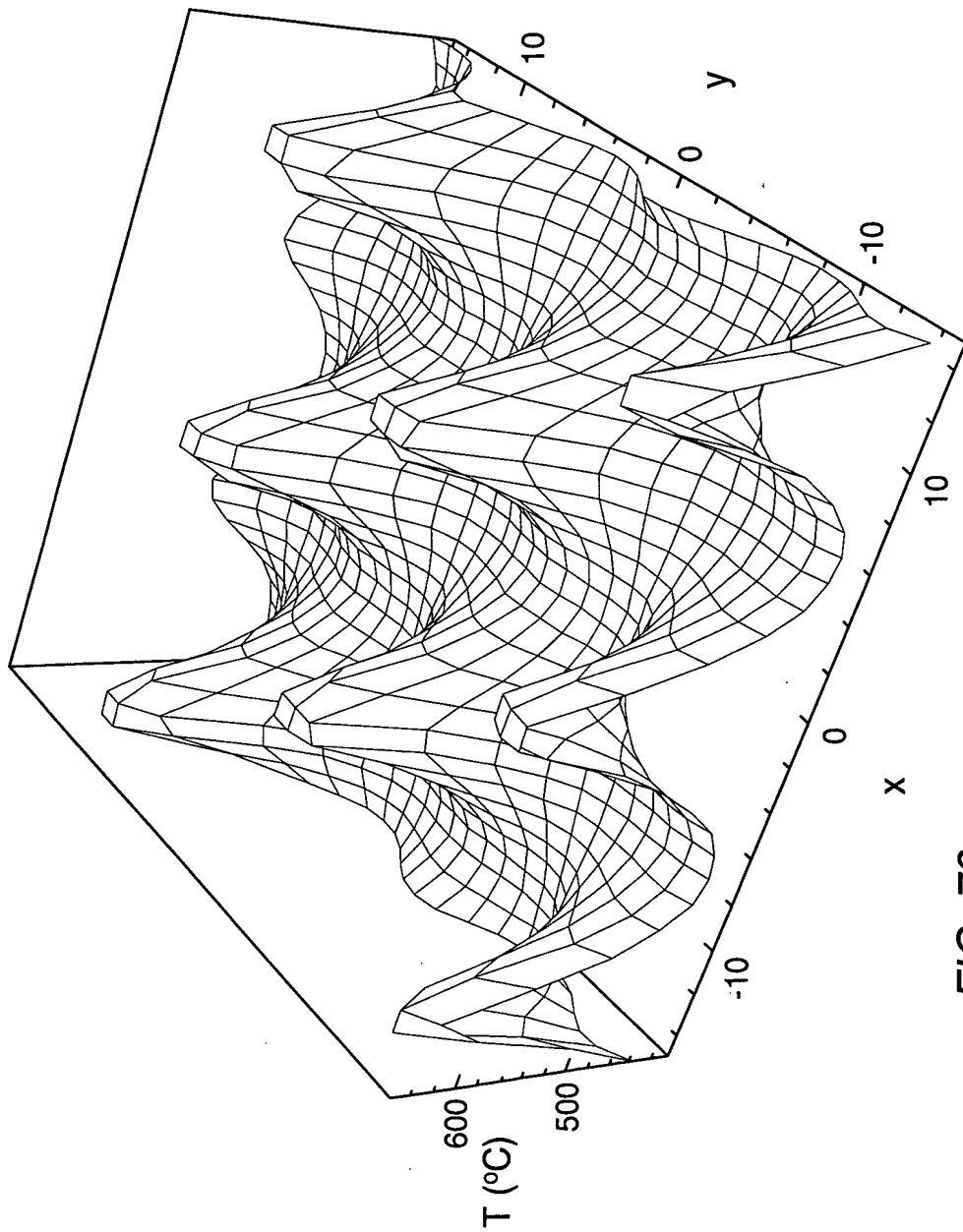


FIG. 78

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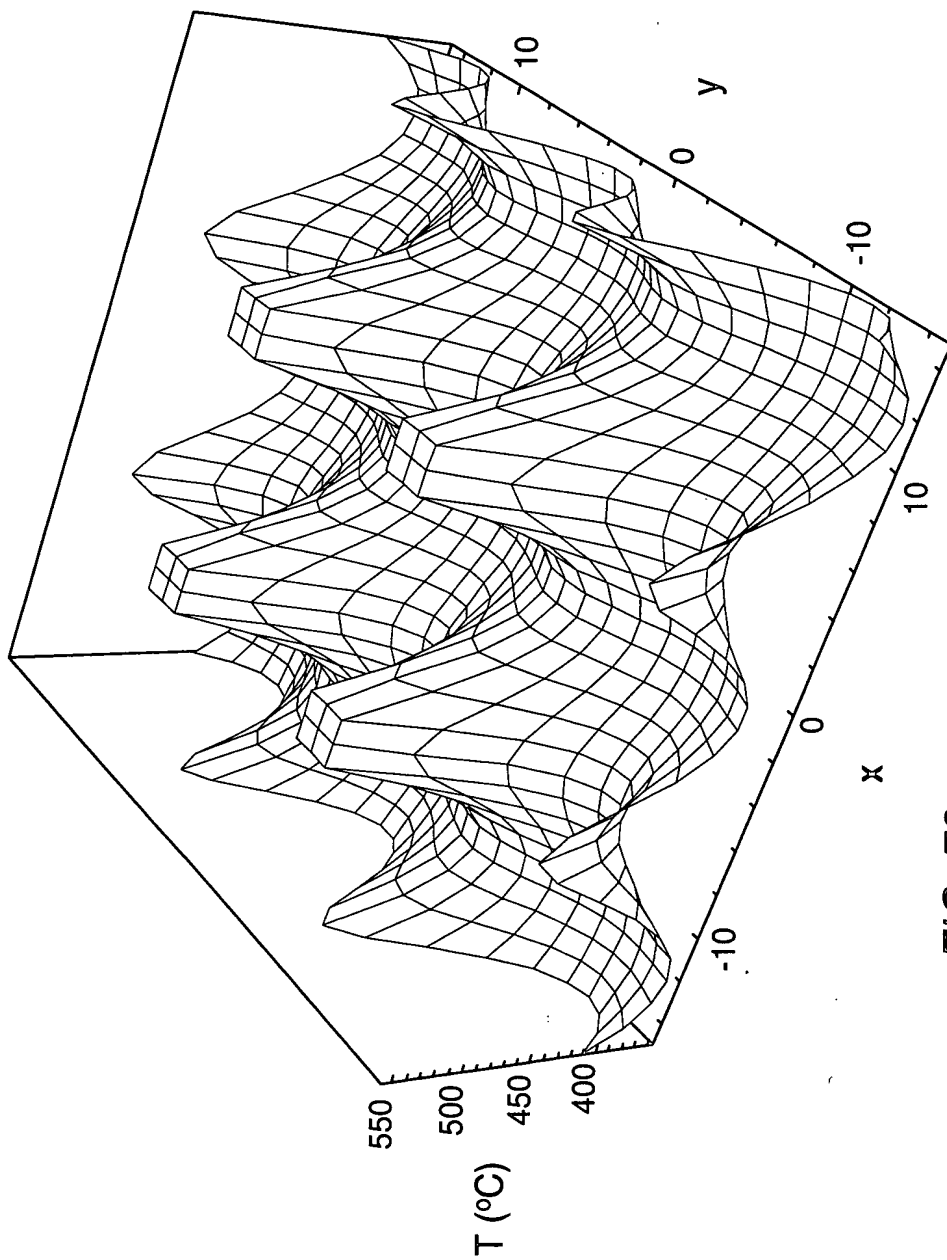


FIG. 79

FOOTNOTES

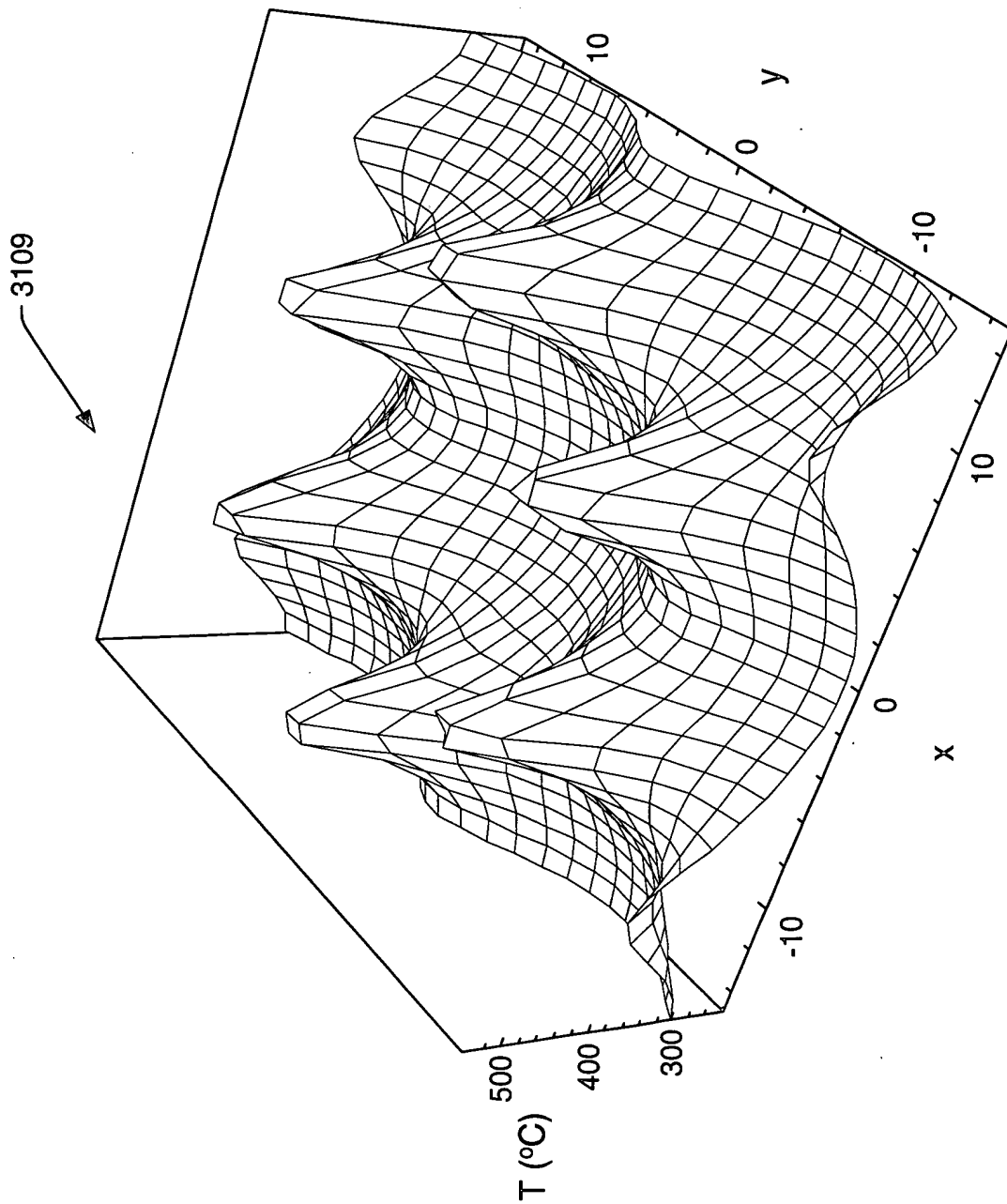


FIG. 79a

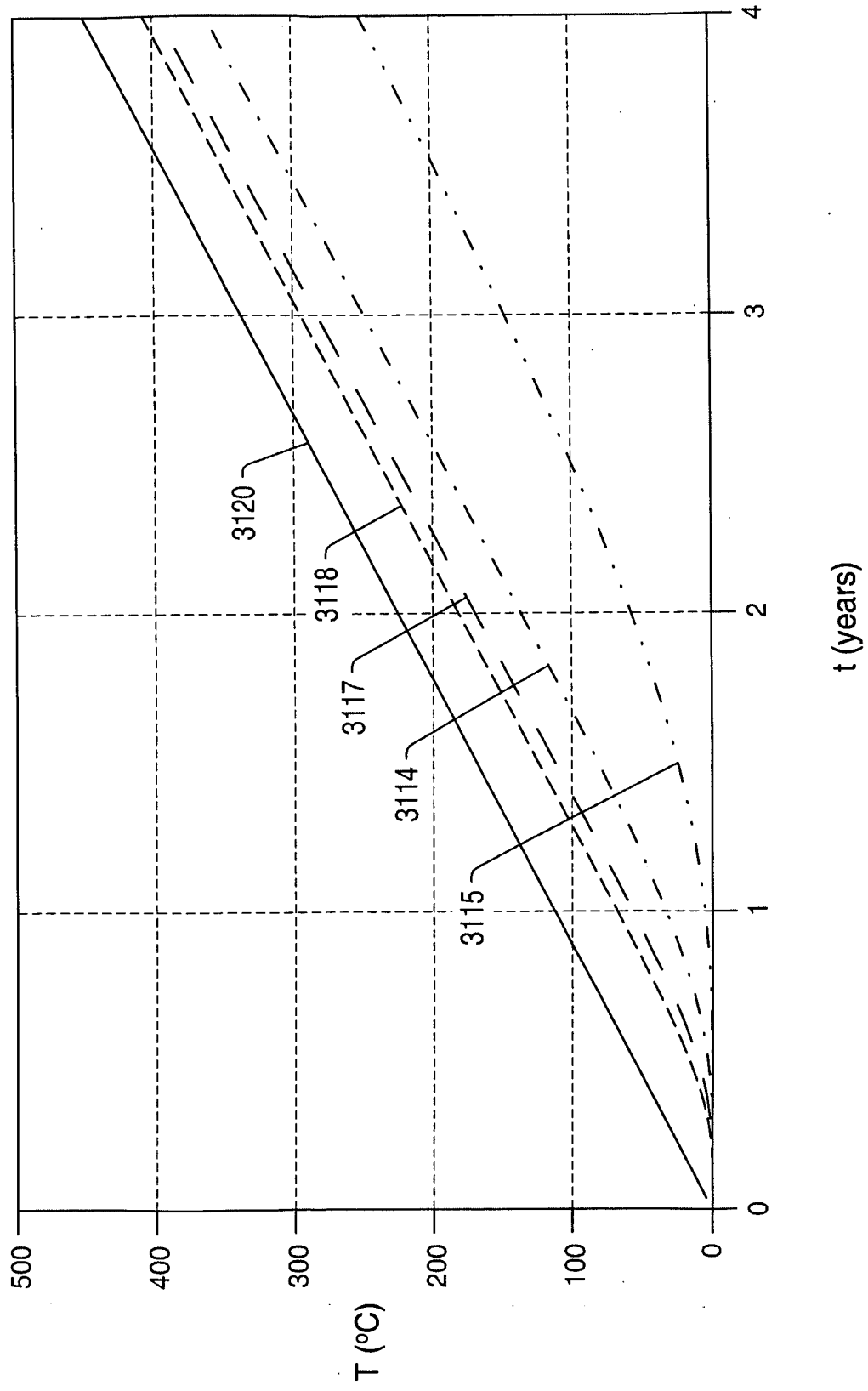


FIG. 80

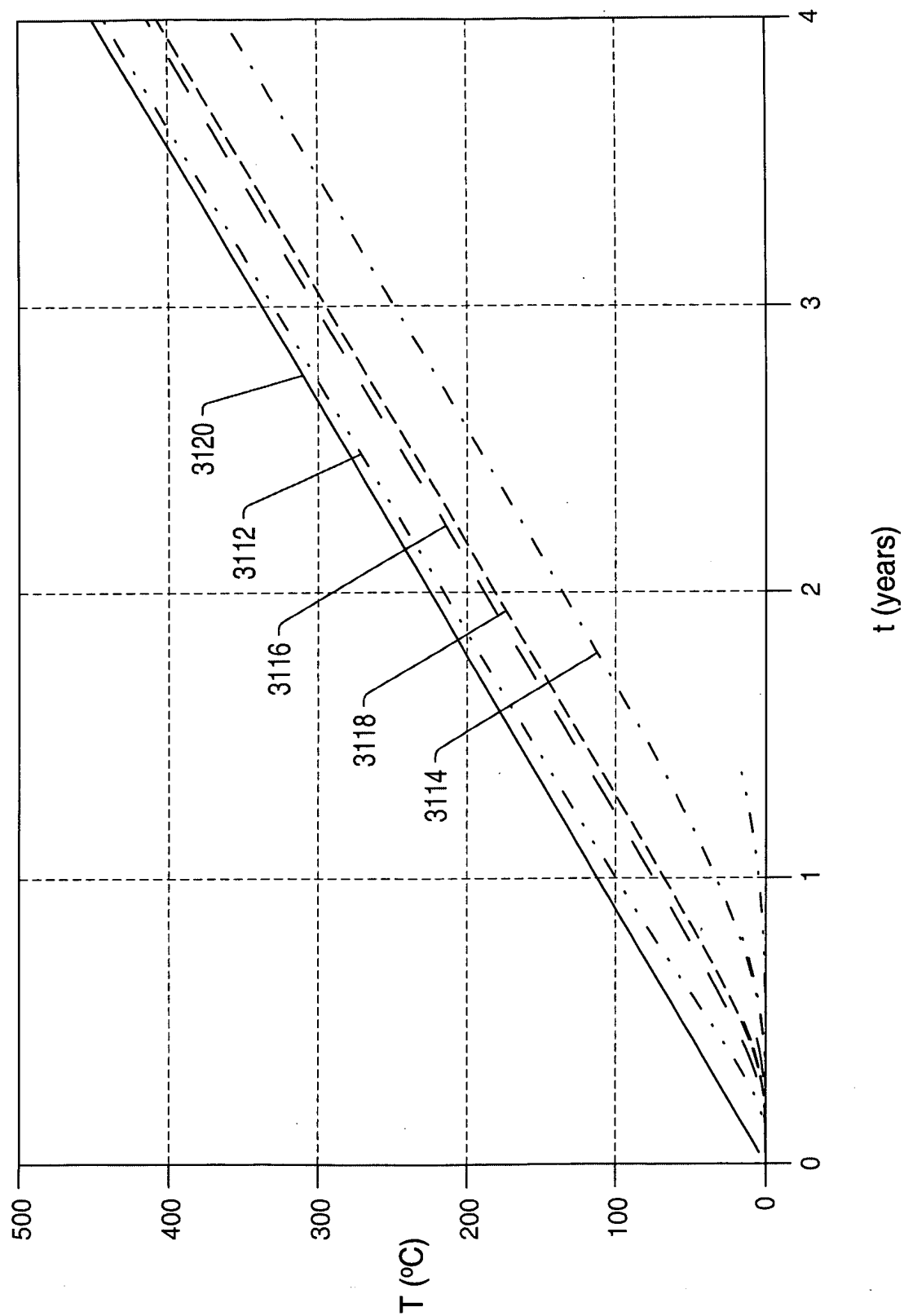


FIG. 81

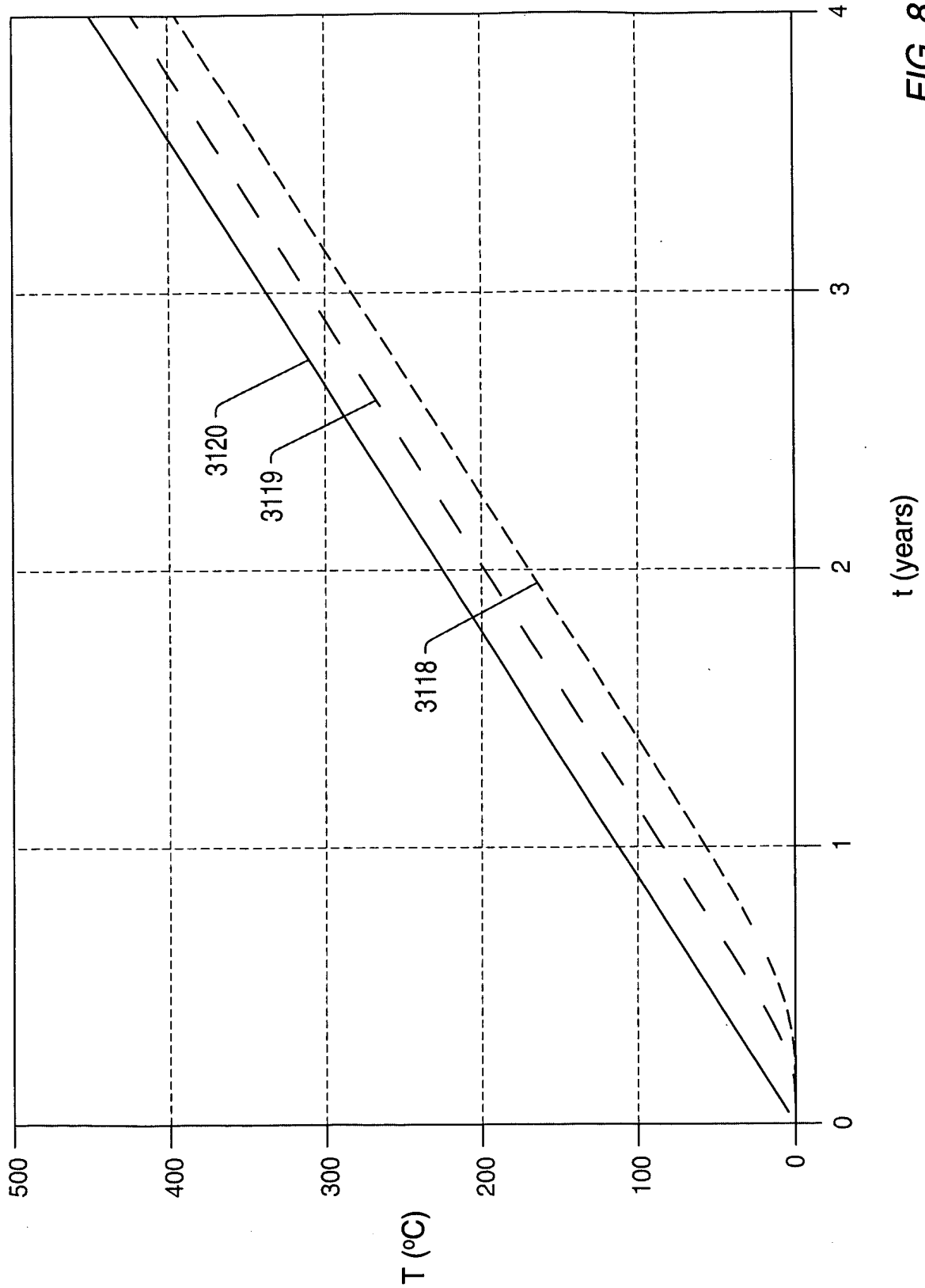


FIG. 81a

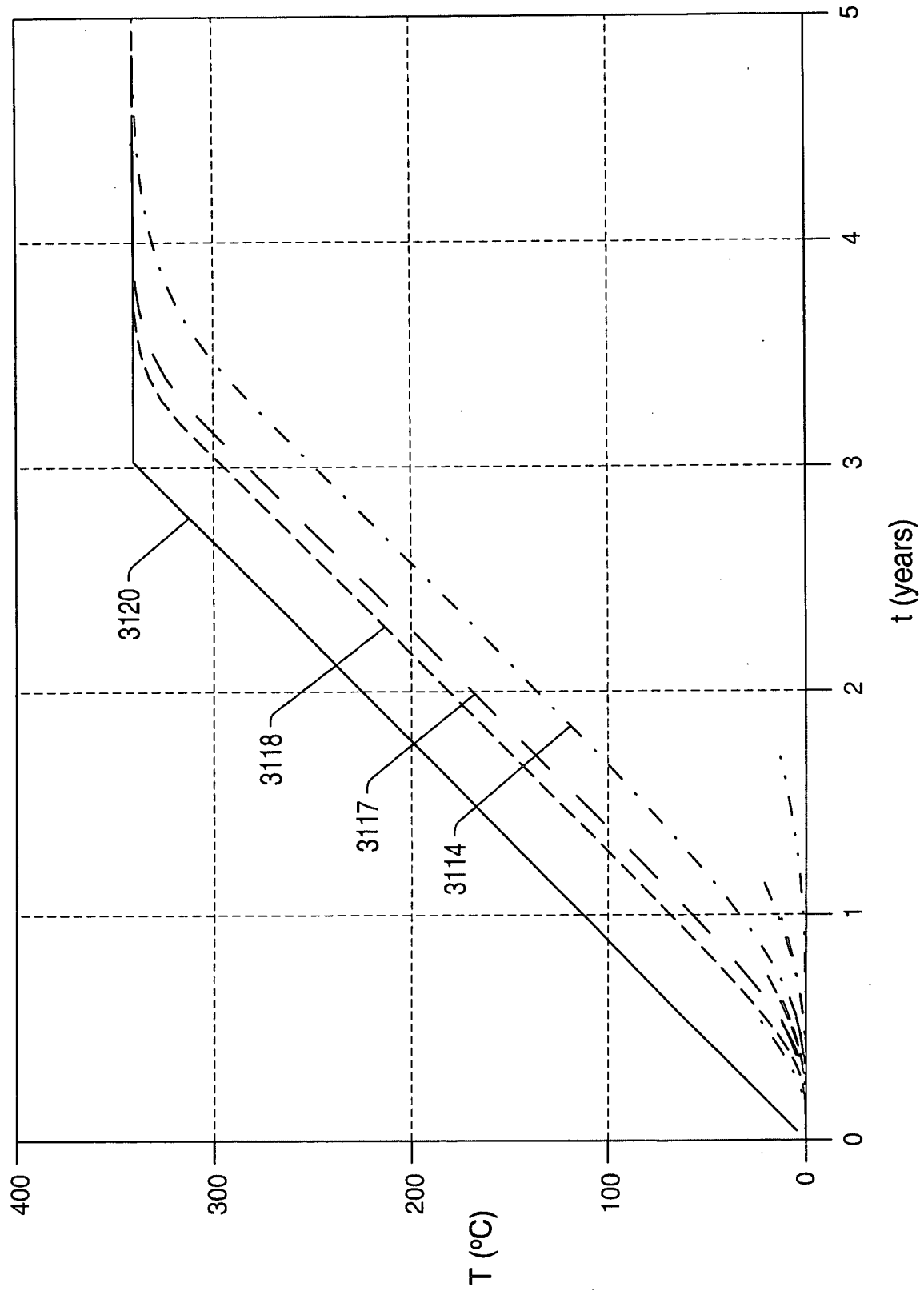


FIG. 81b

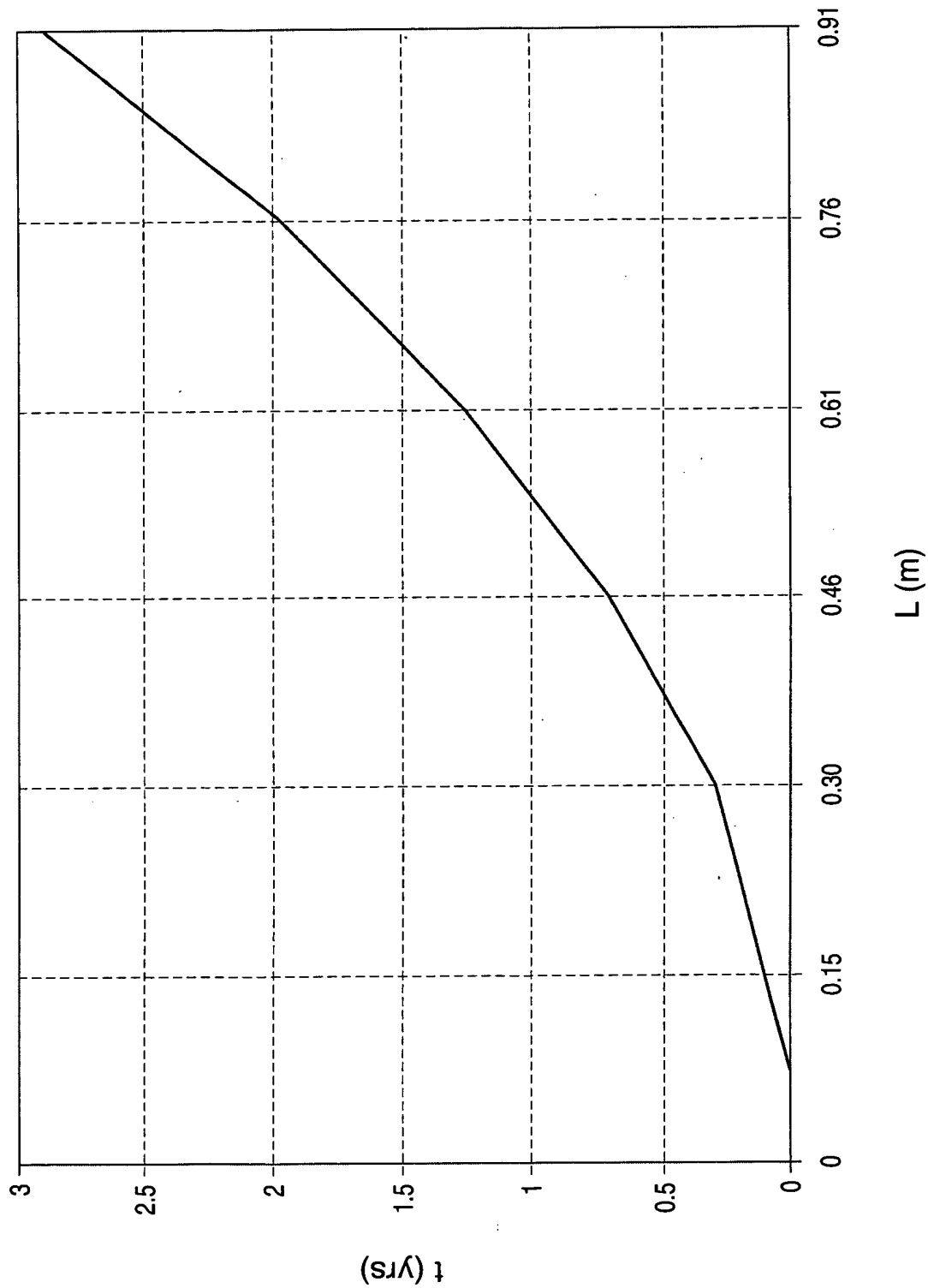


FIG. 82

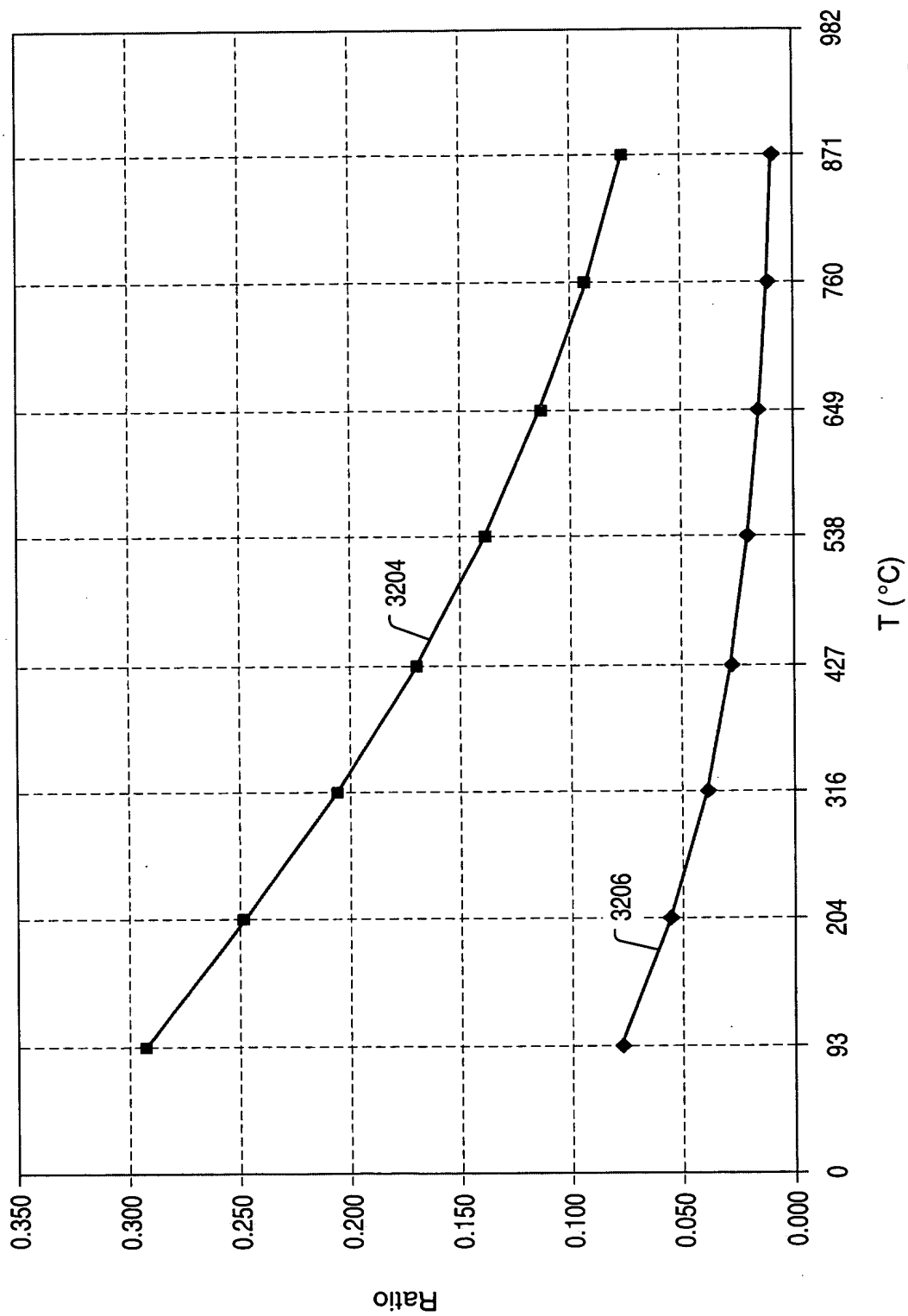


FIG. 83

PHENOL-ETHYLENE GLYCOL

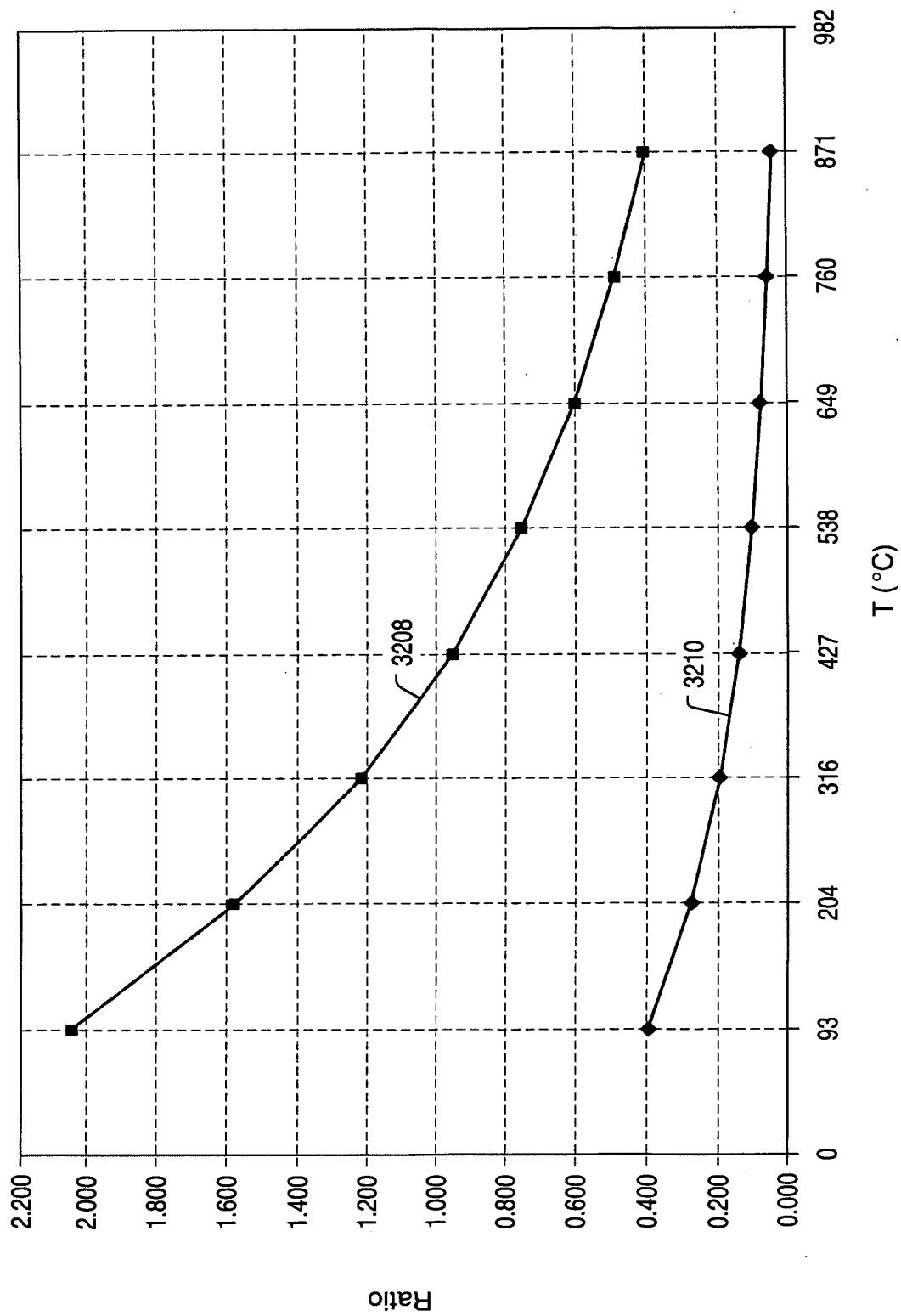


FIG. 84

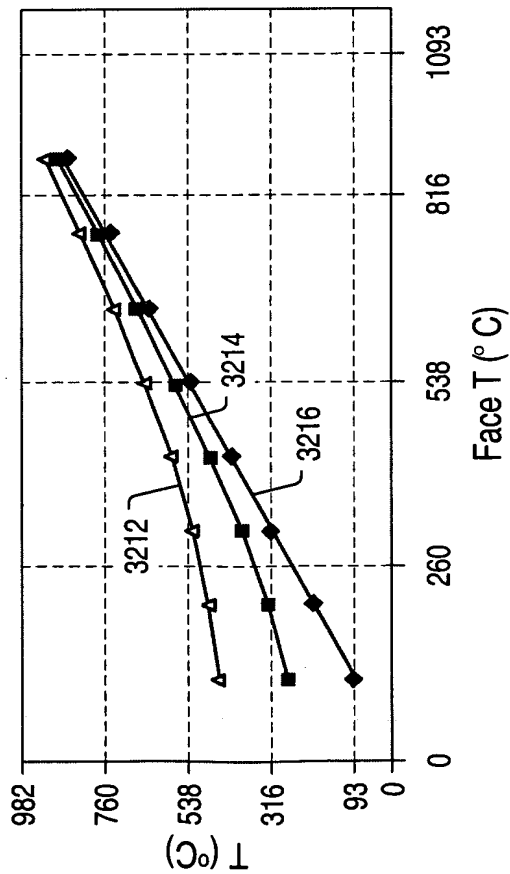


FIG. 85

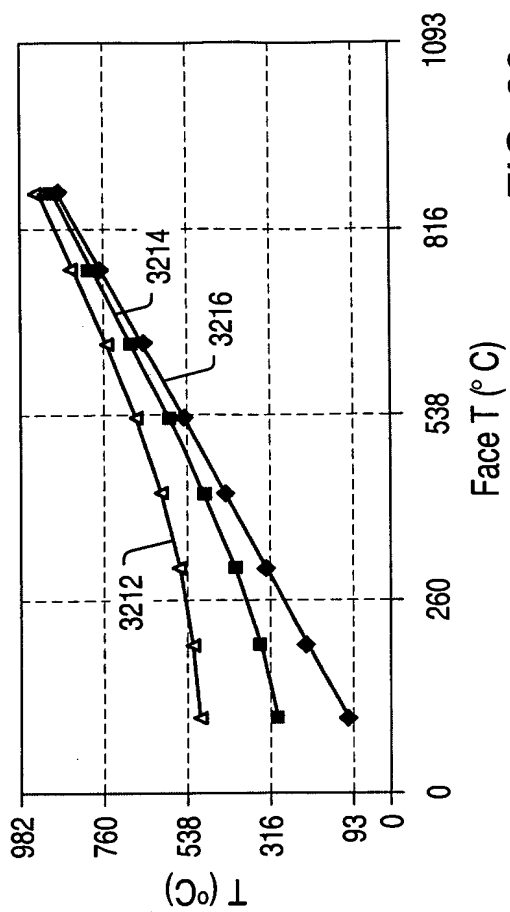


FIG. 86

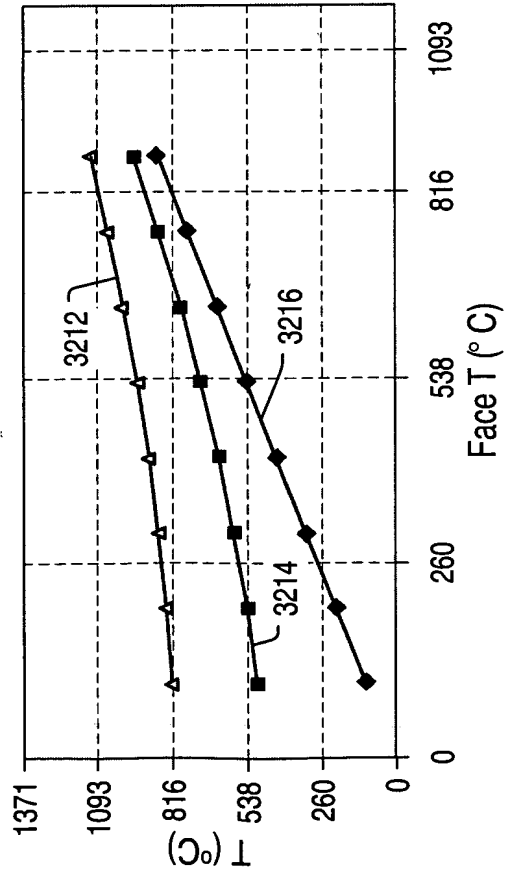


FIG. 87

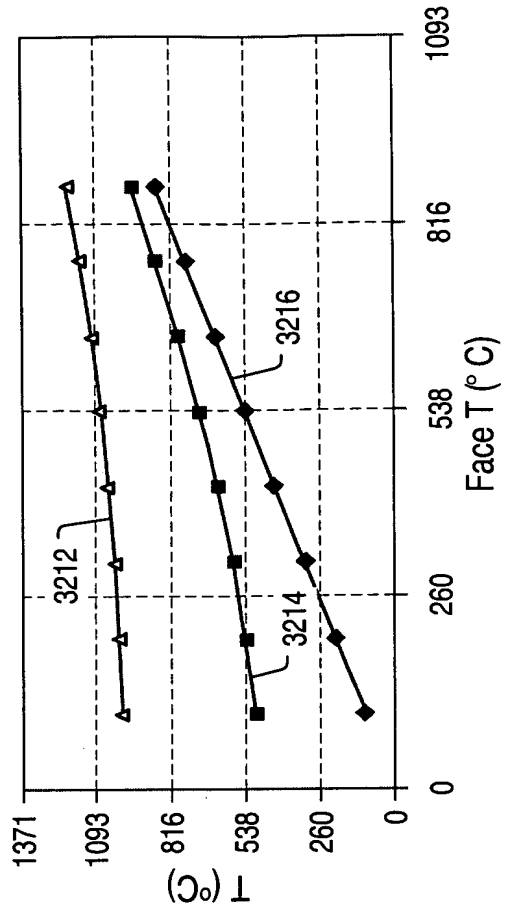


FIG. 88

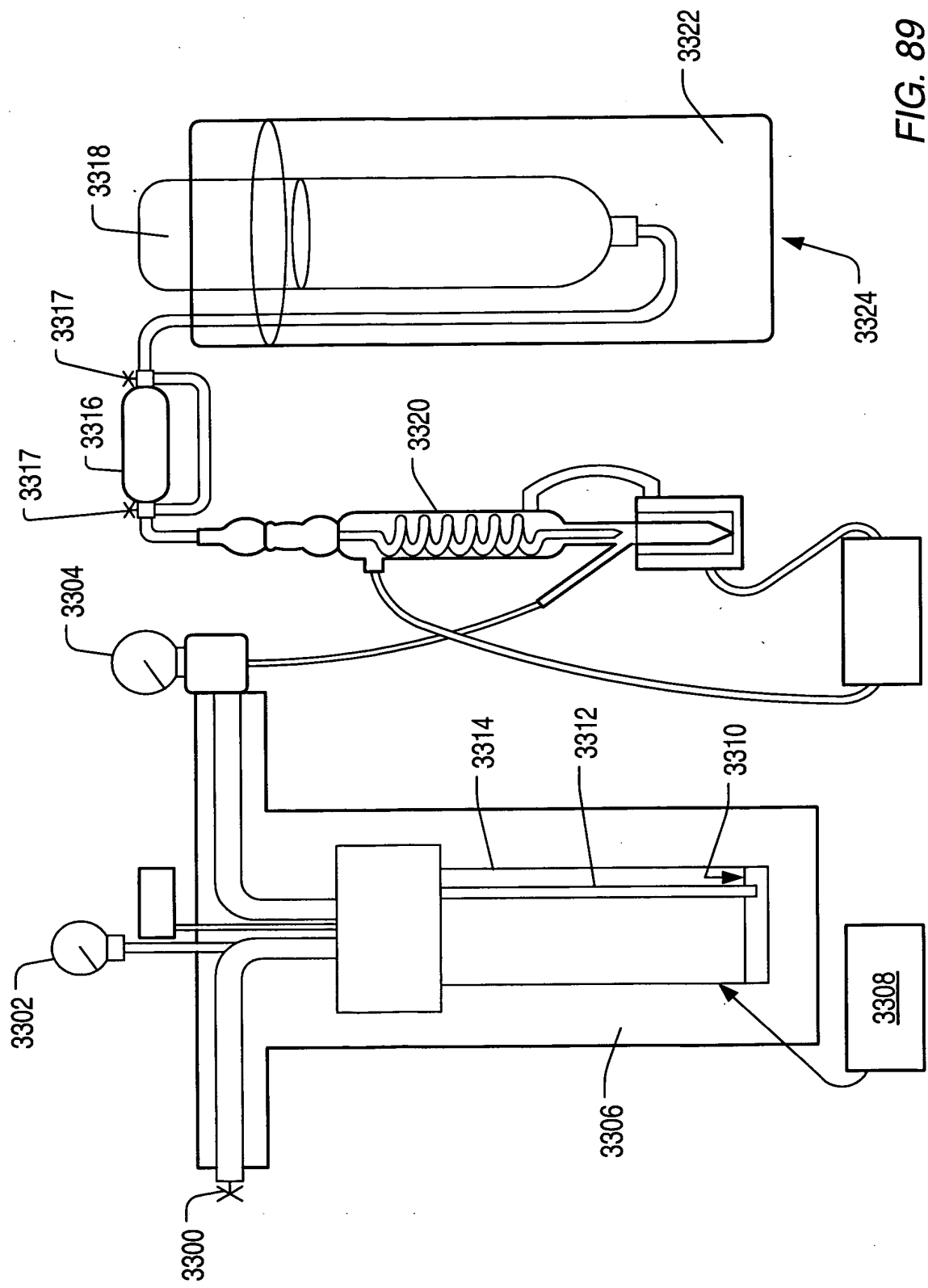


FIG. 89

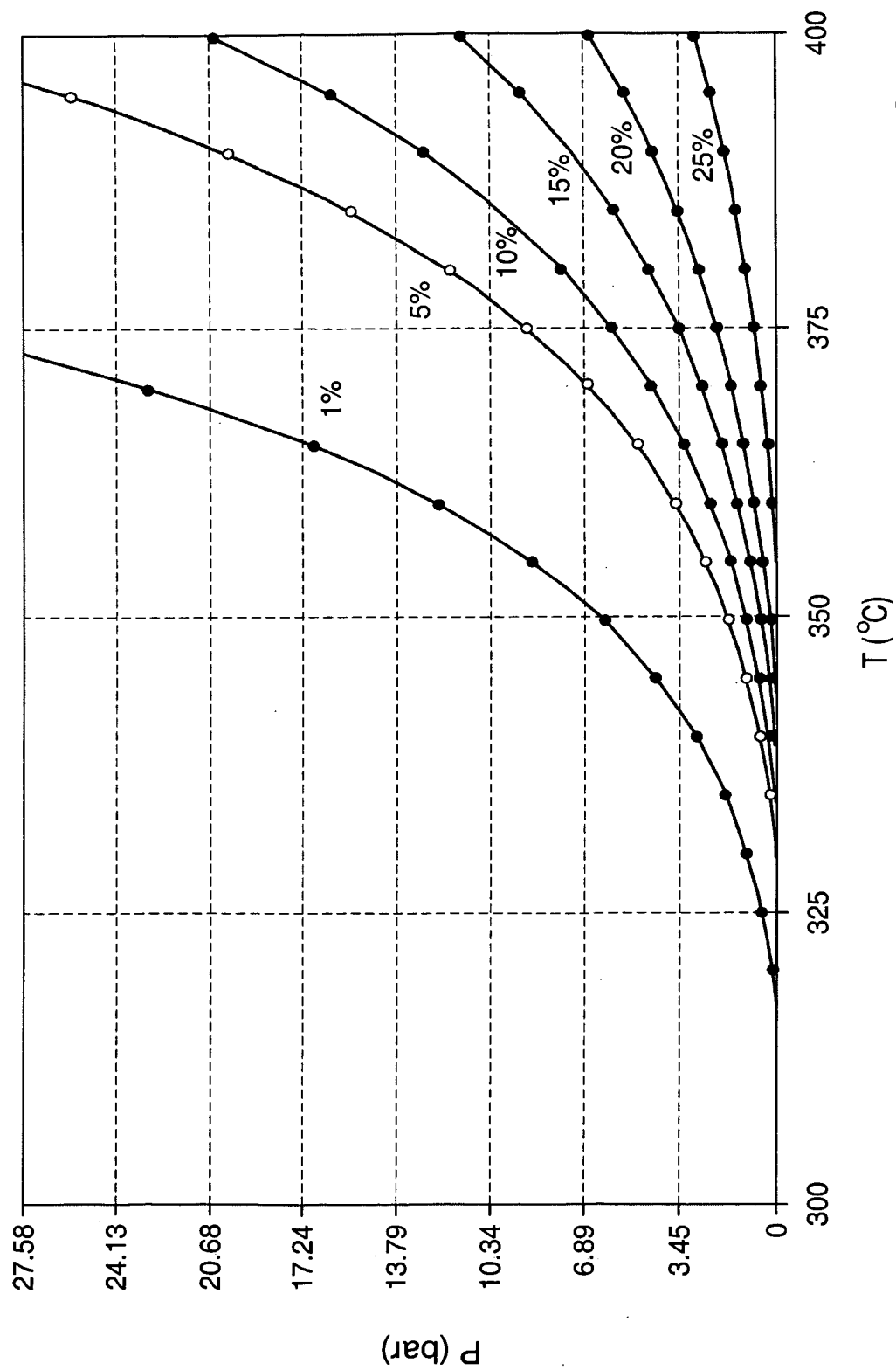


FIG. 90

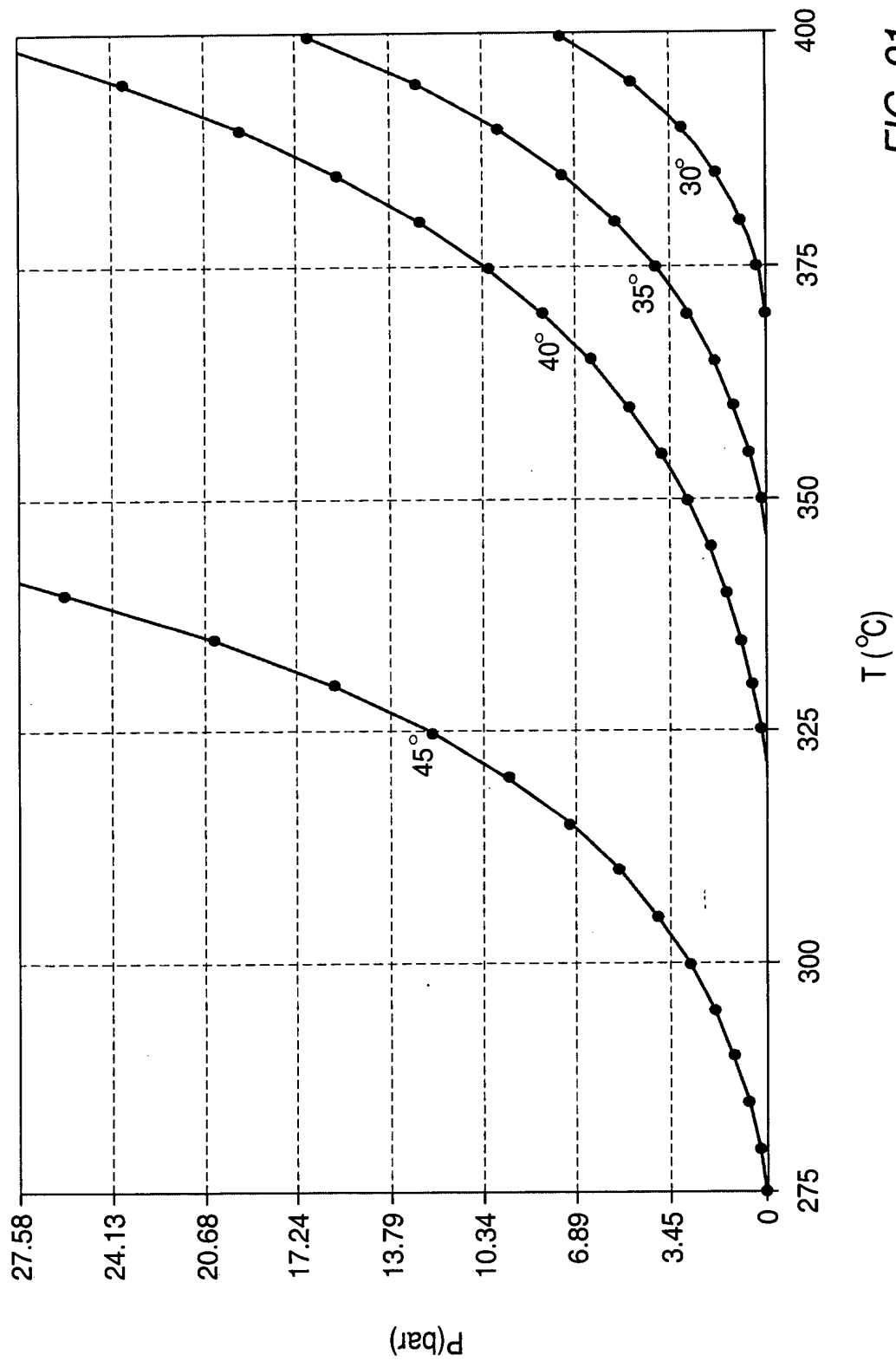


FIG. 91

FOOTNOTES

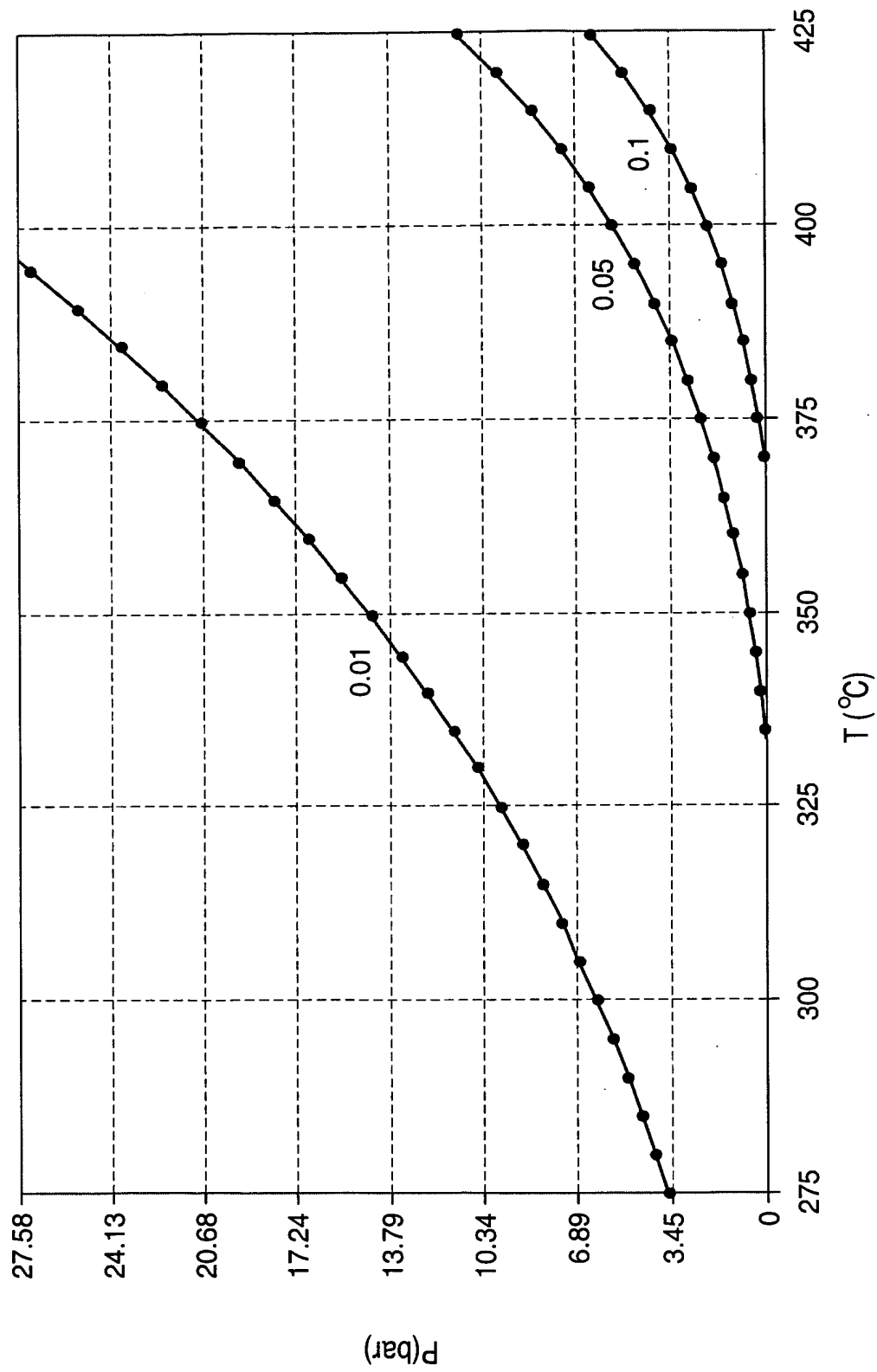


FIG. 92

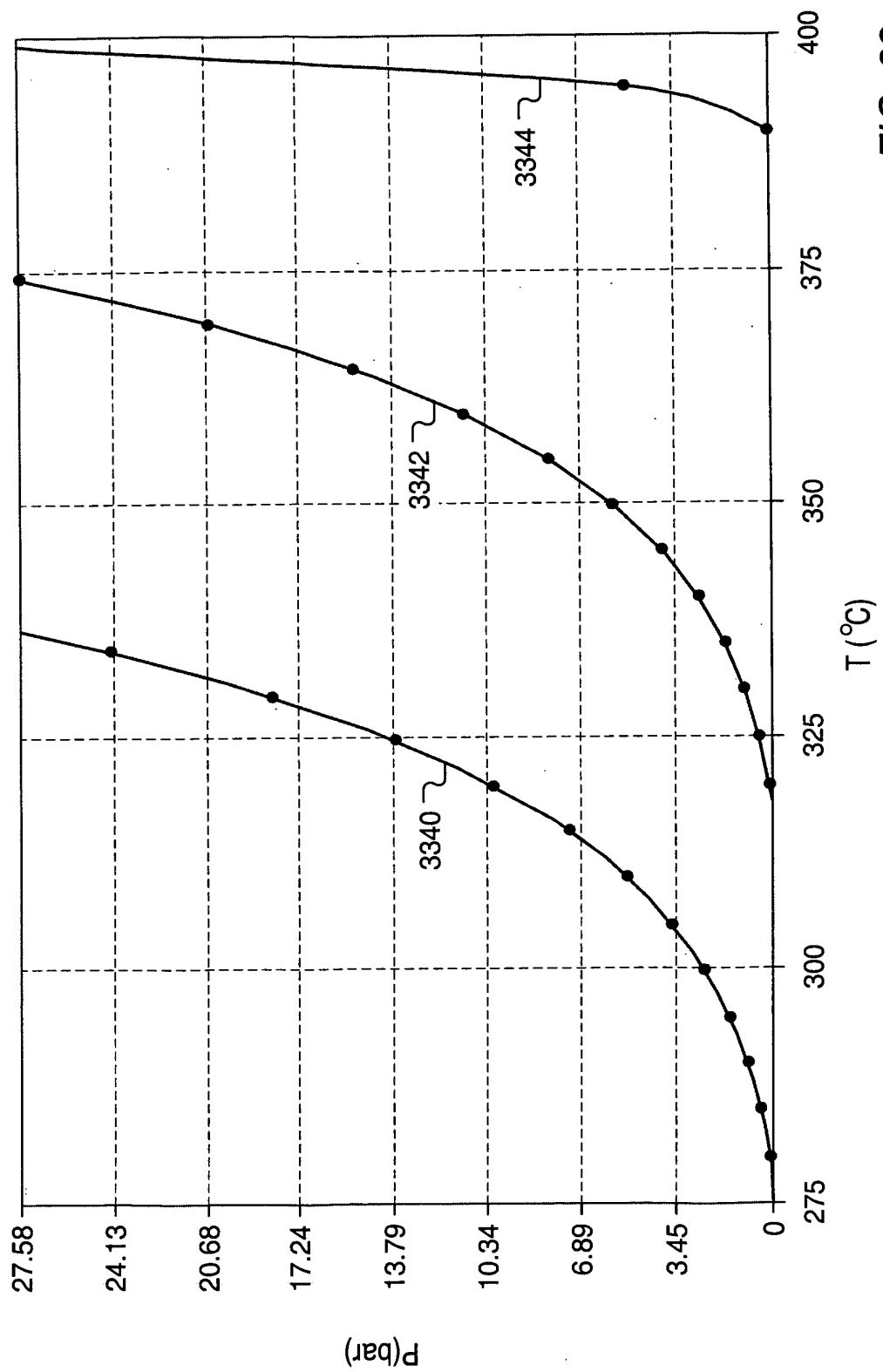


FIG. 93

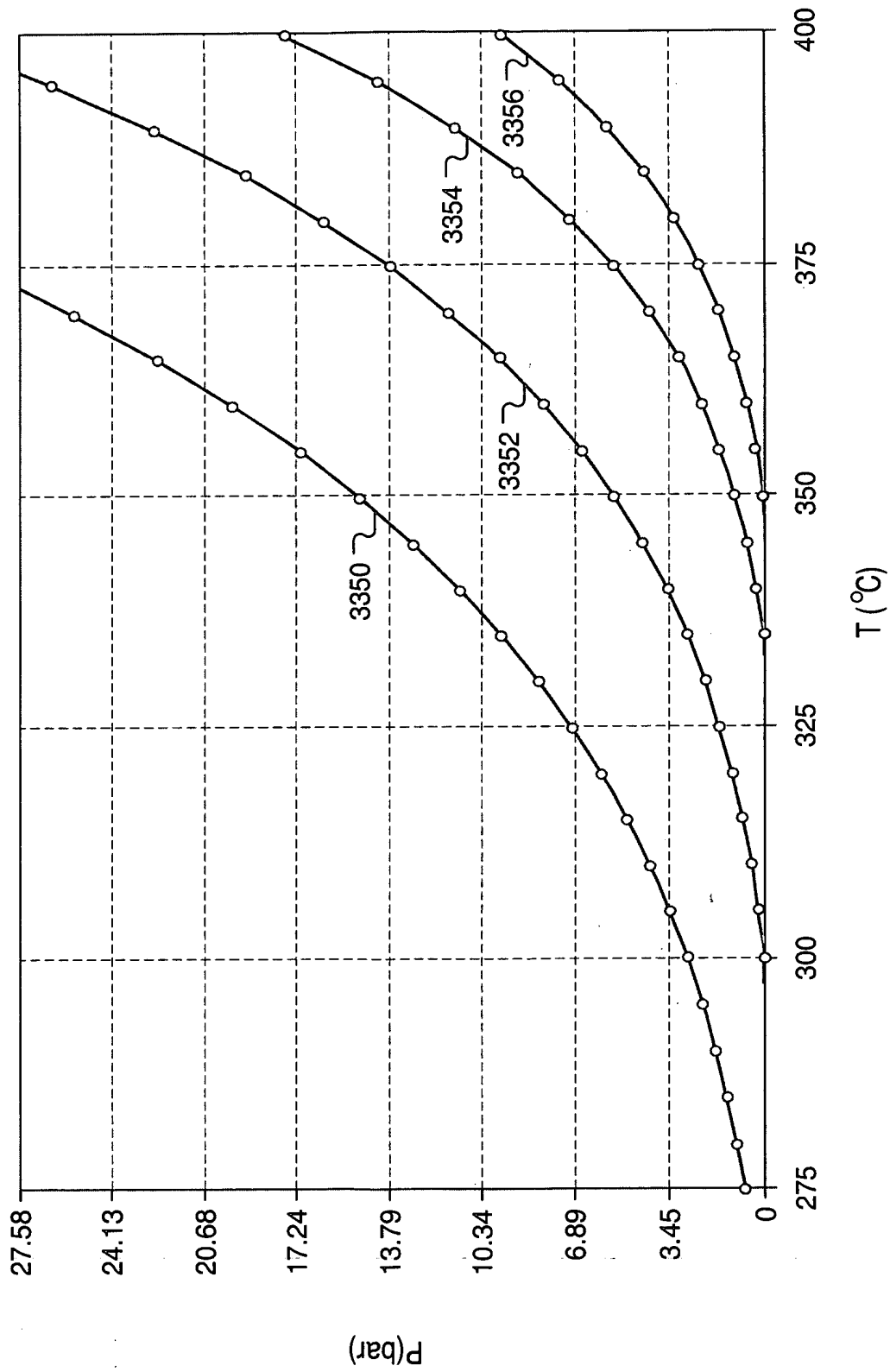


FIG. 94

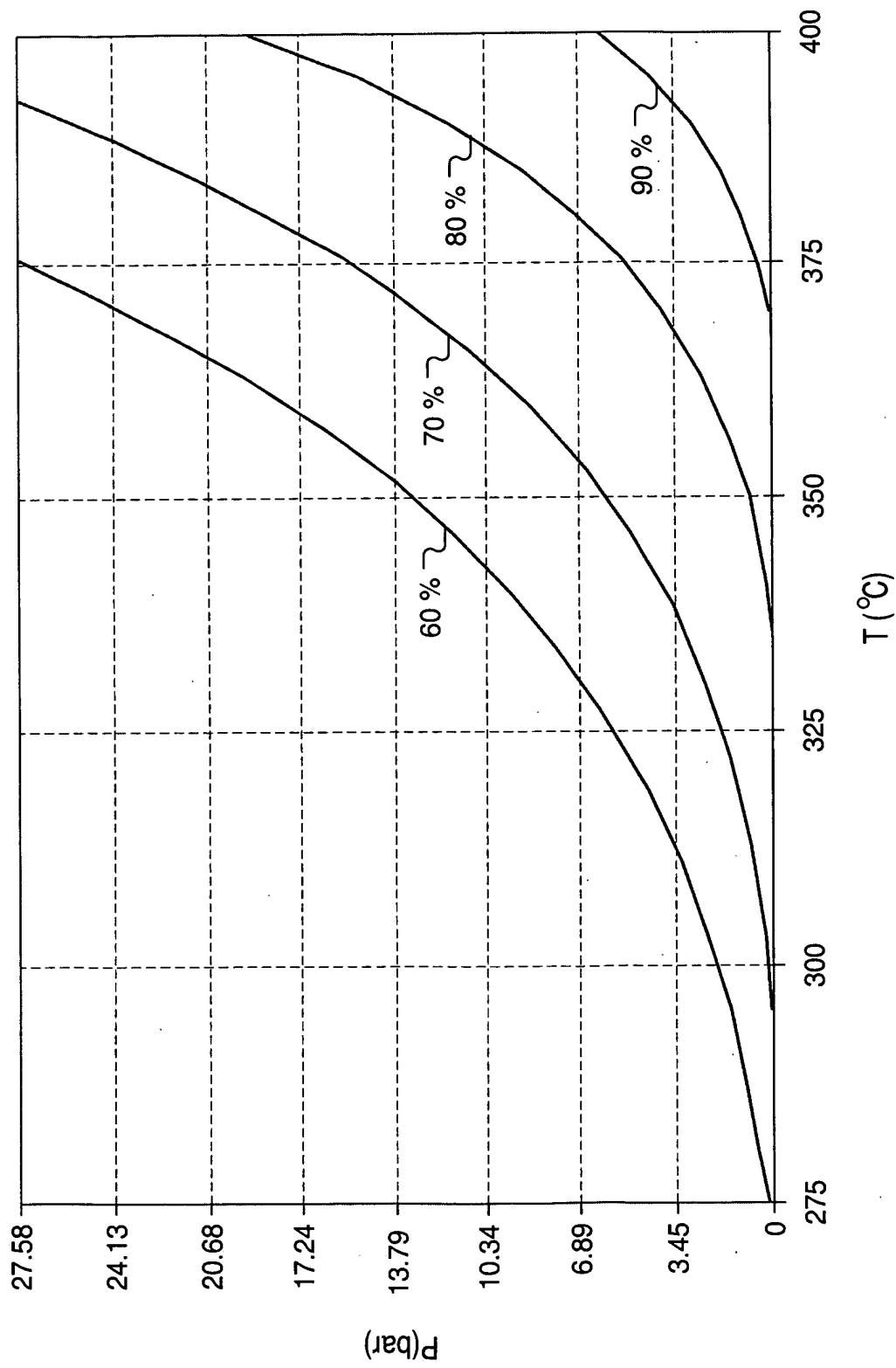


FIG. 95

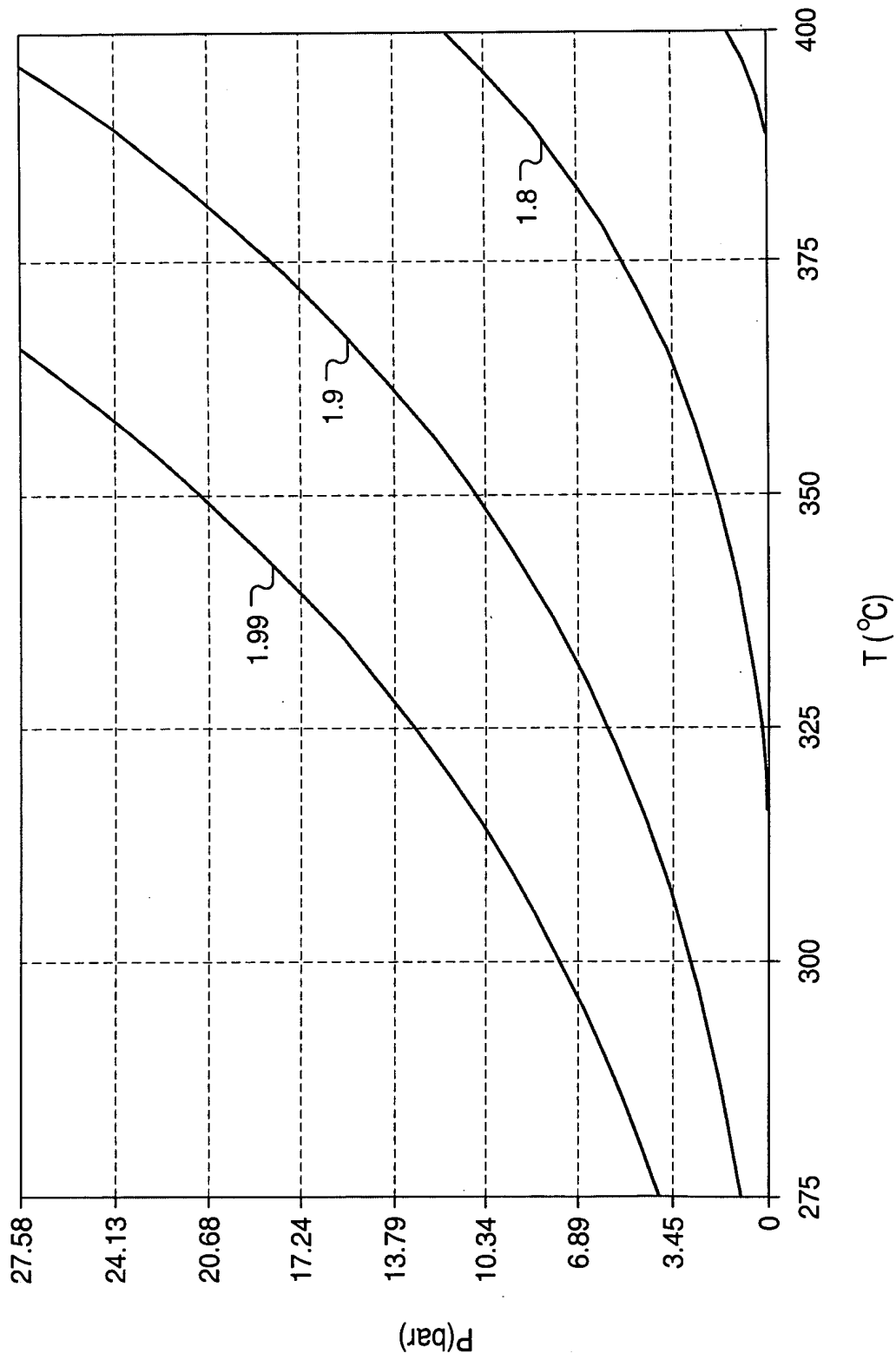


FIG. 96

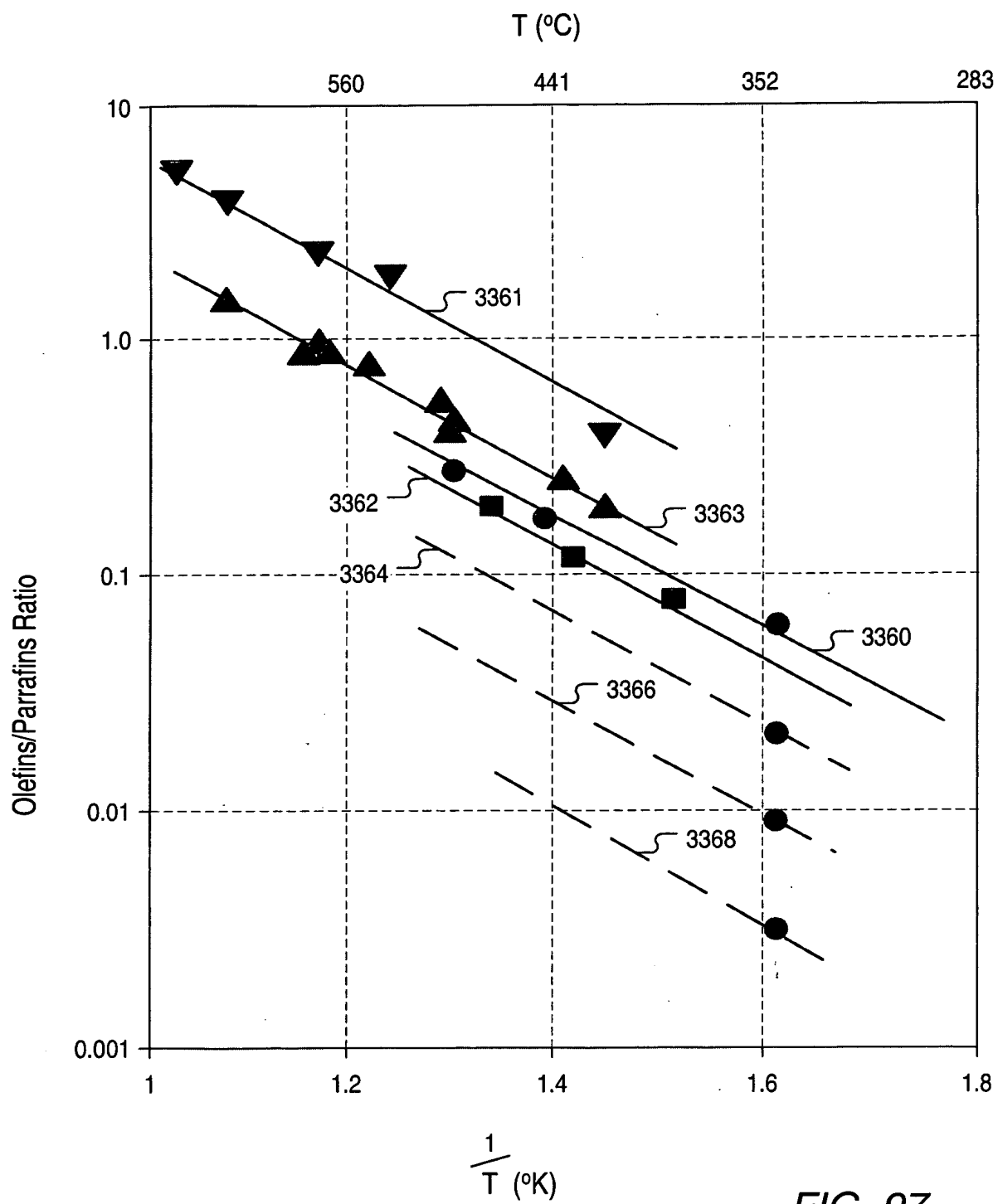


FIG. 97

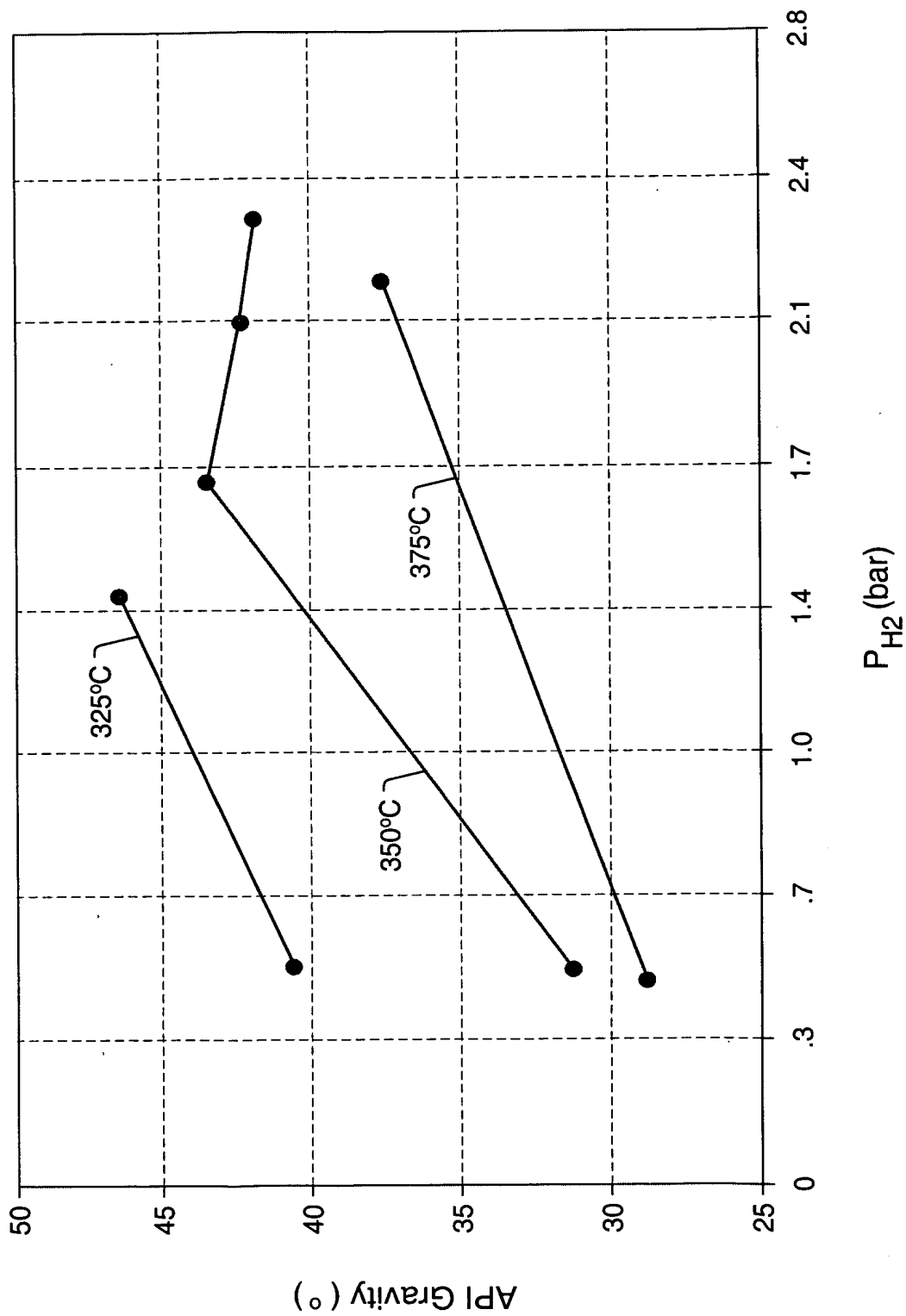


FIG. 98

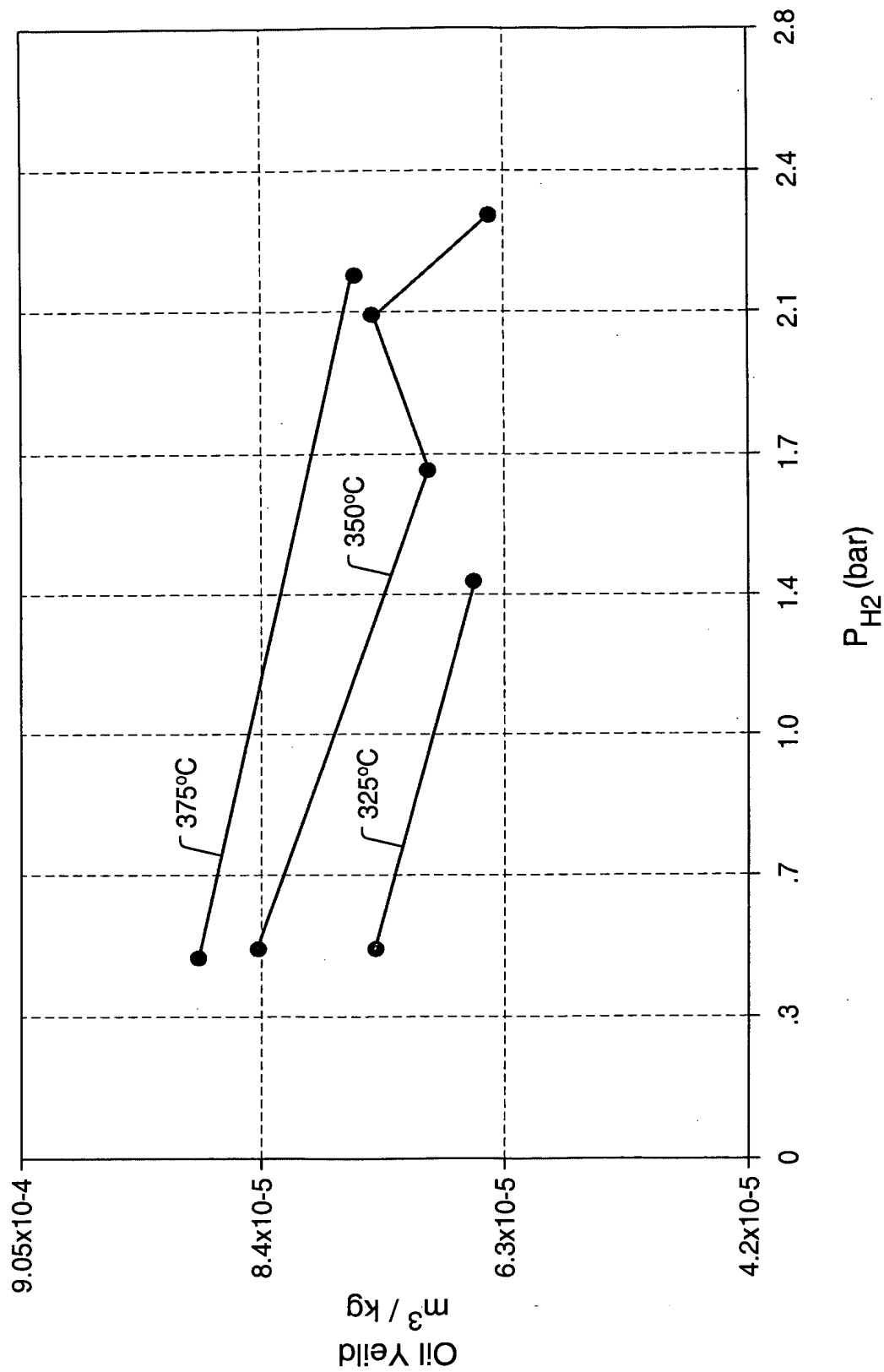


FIG. 99

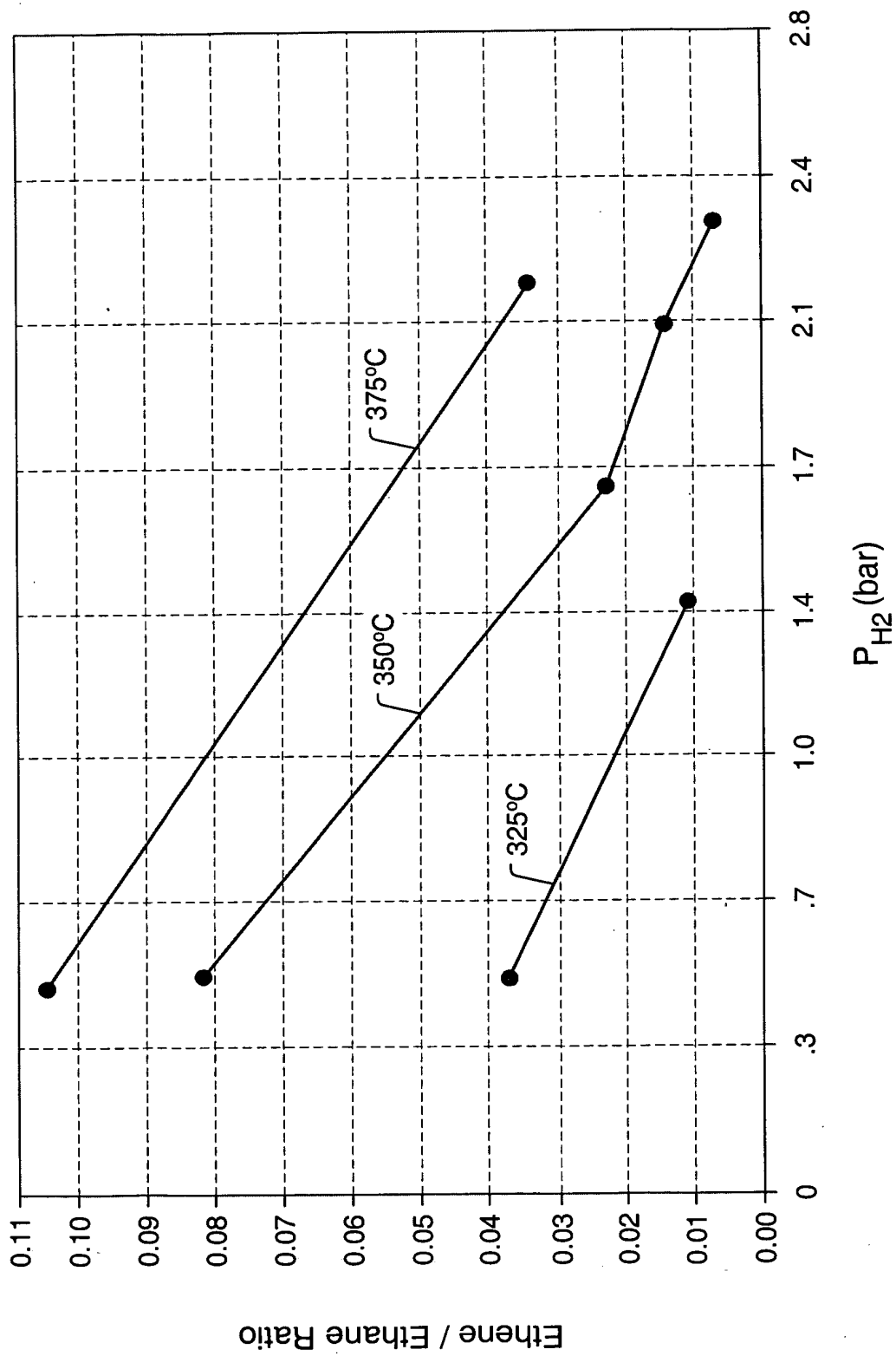


FIG. 100

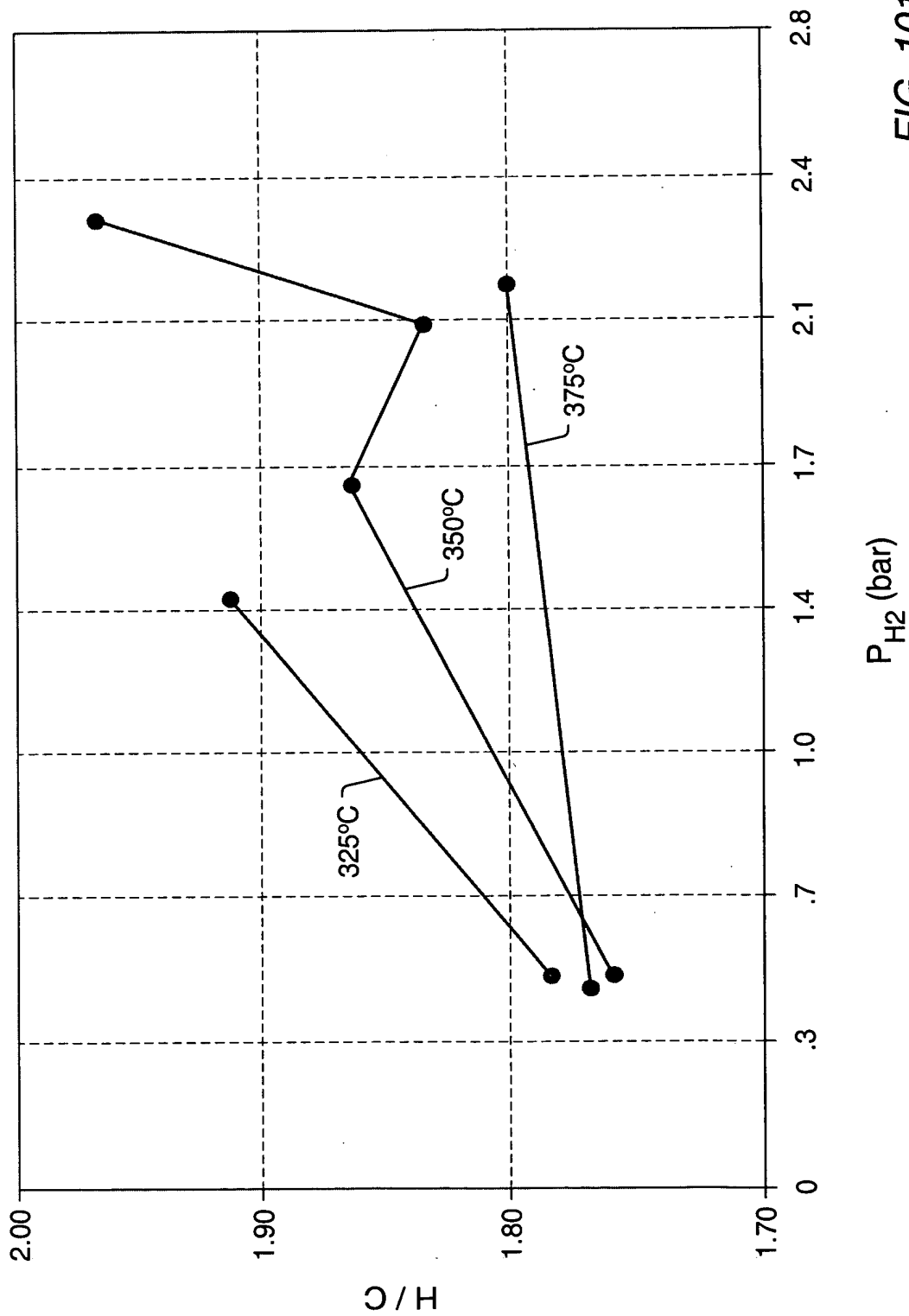


FIG. 101

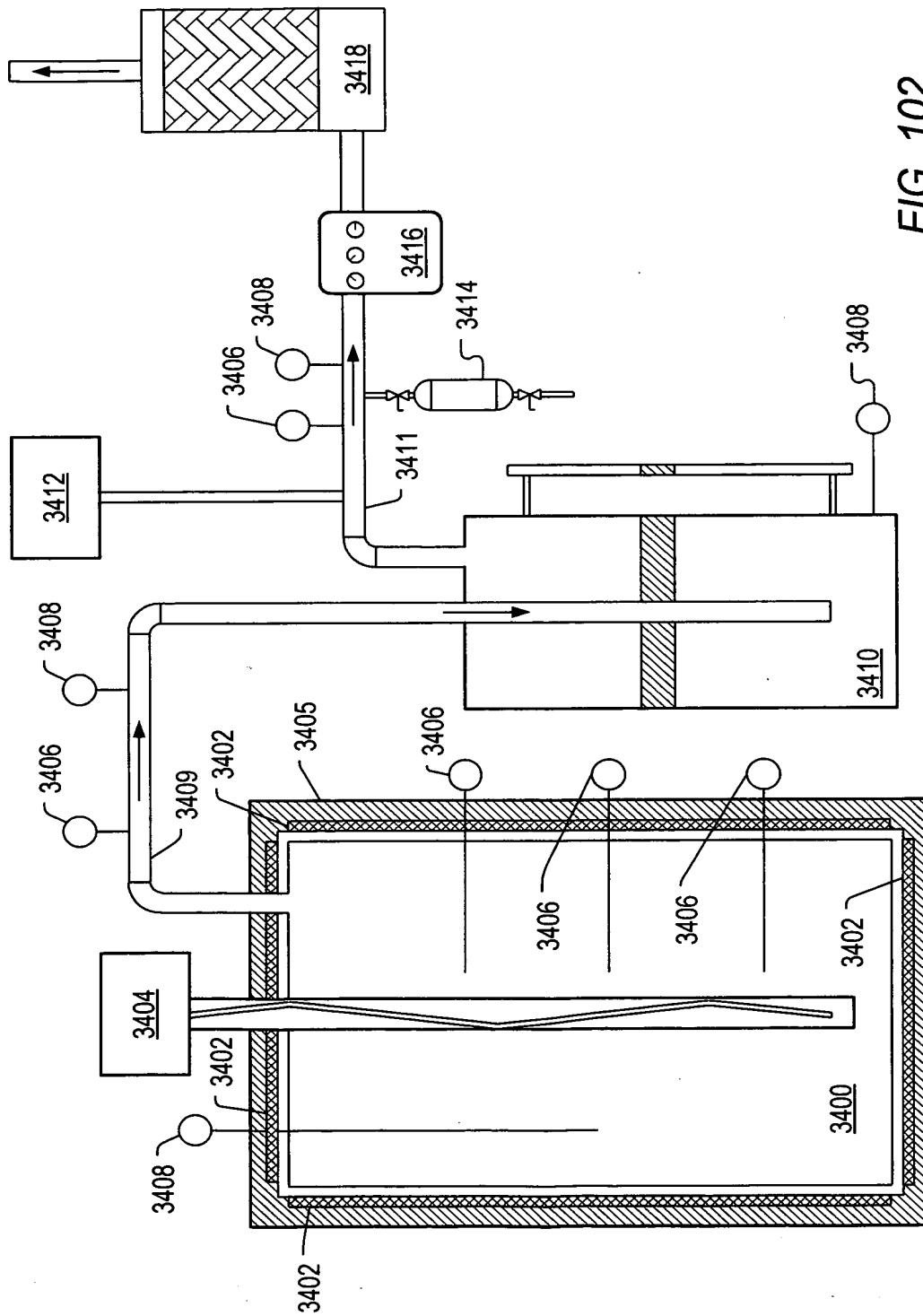


FIG. 102

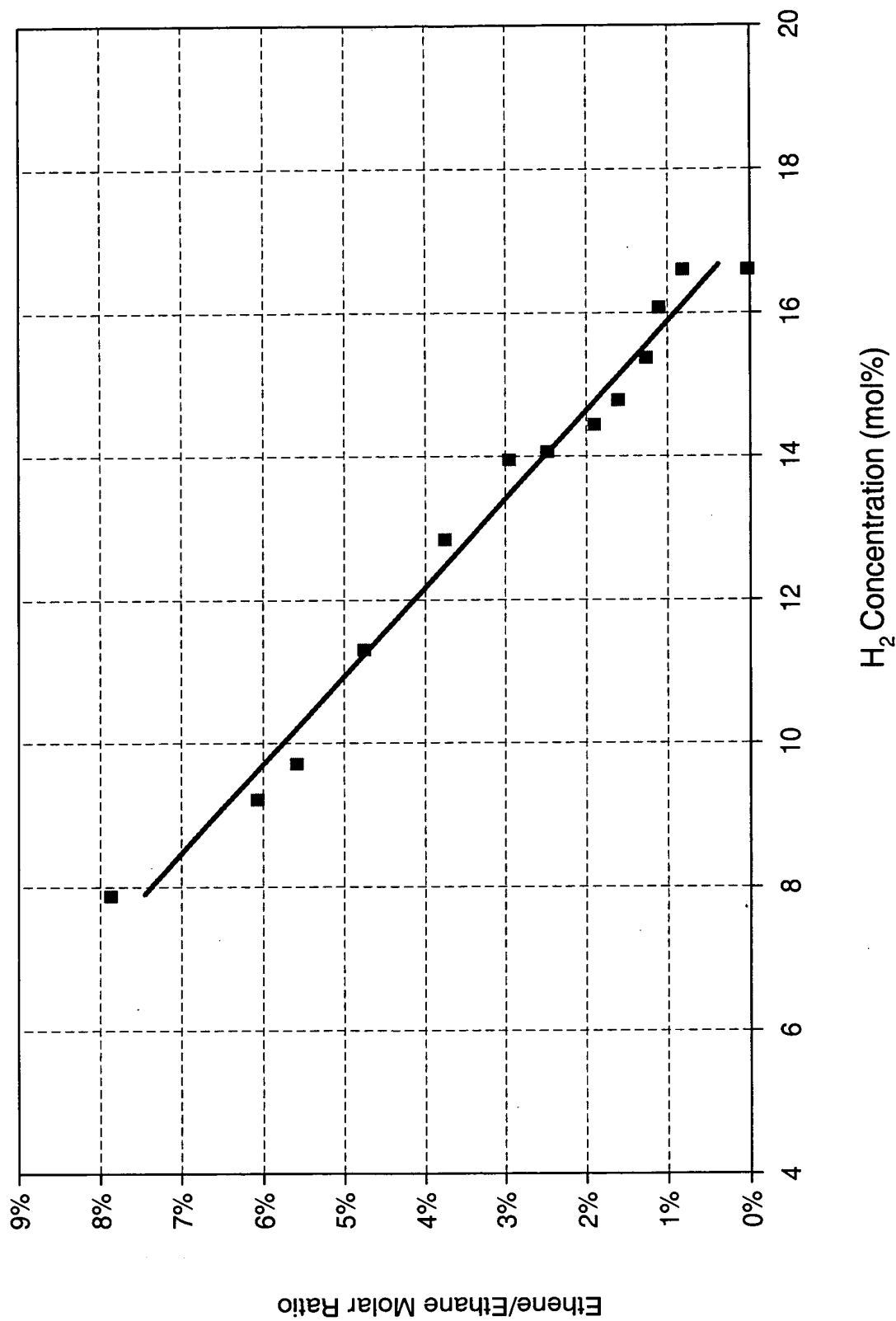
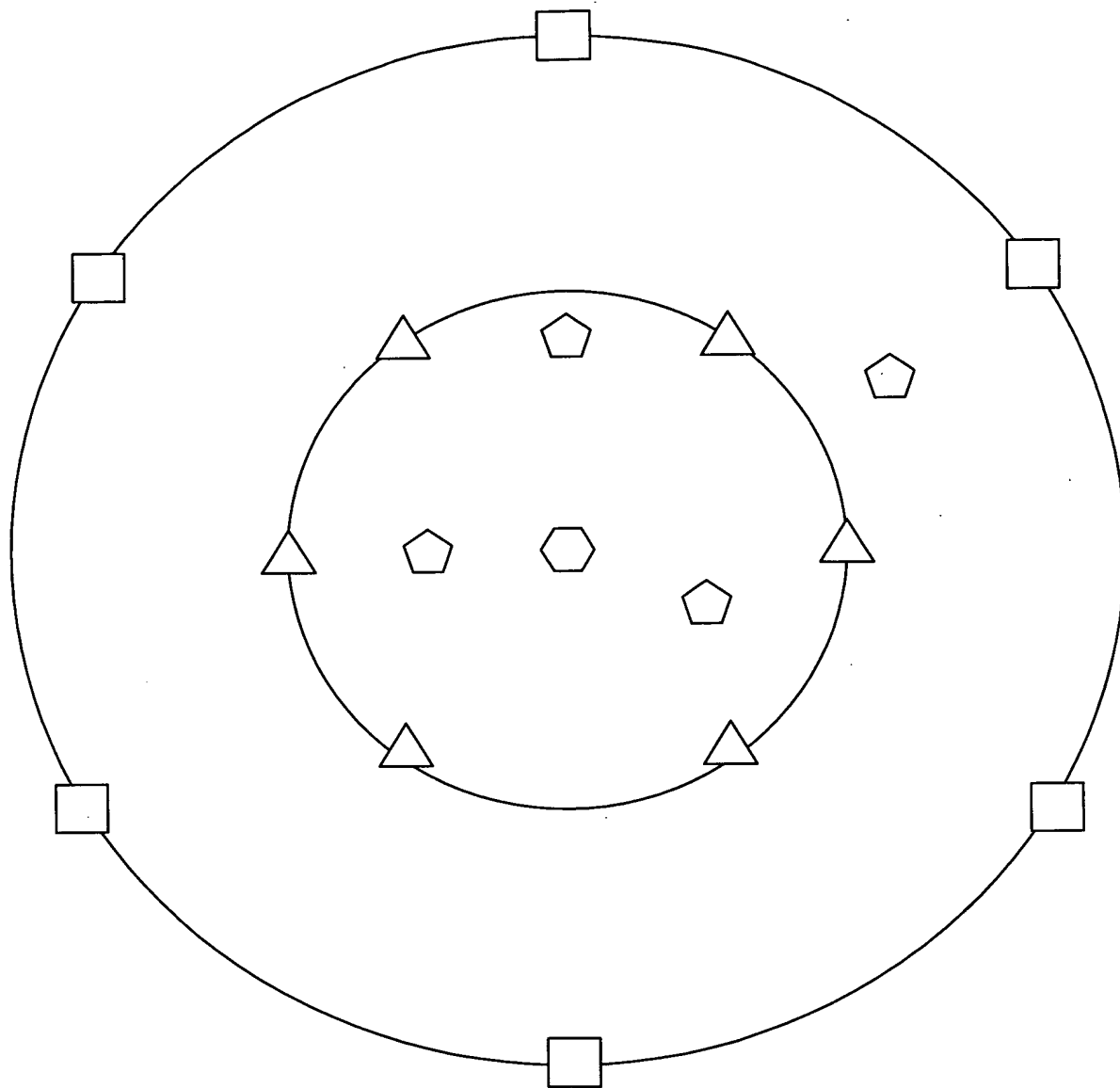


FIG. 103

FIG. 104



△ - 3600

⬠ - 3603

□ - 3604

⬡ - 3602

FIG. 104

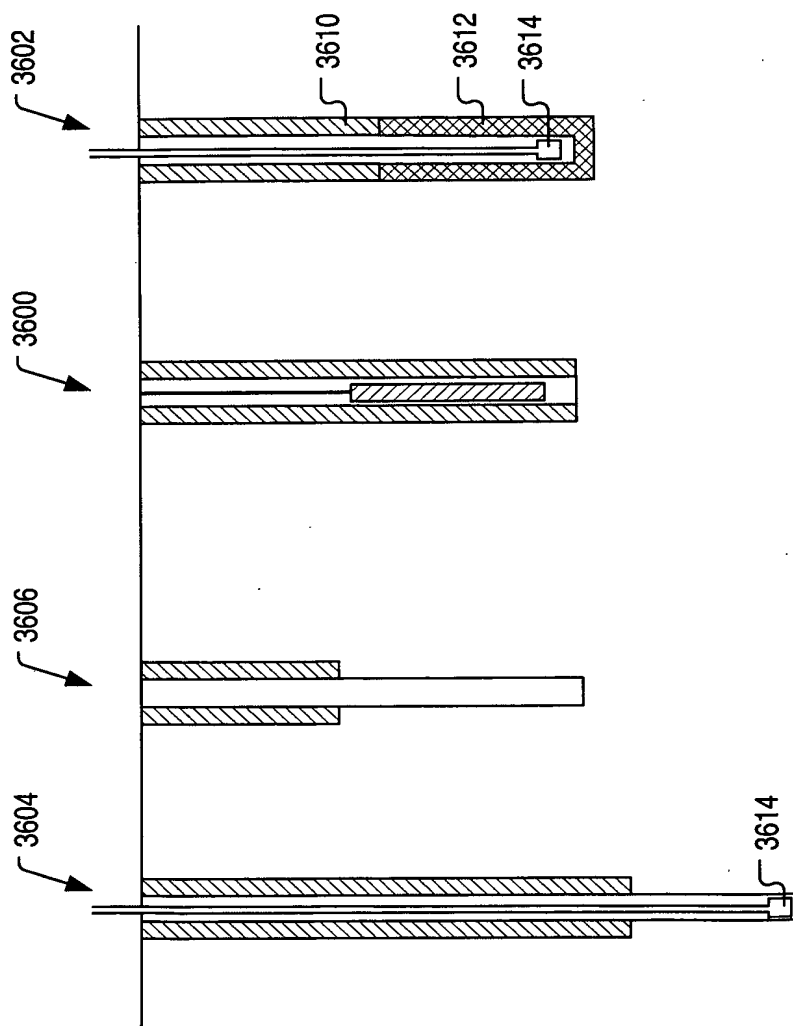


FIG. 105

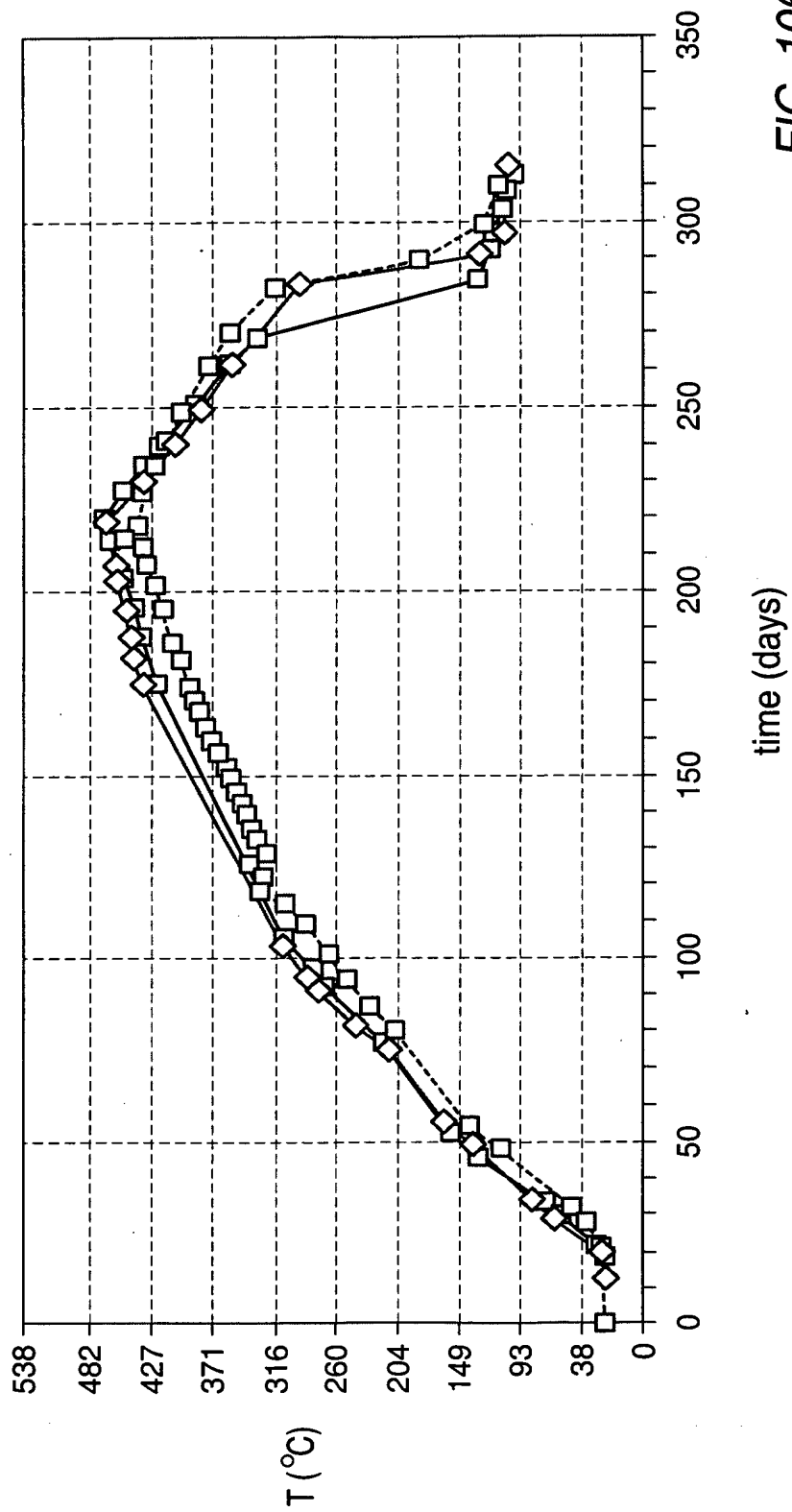


FIG. 106

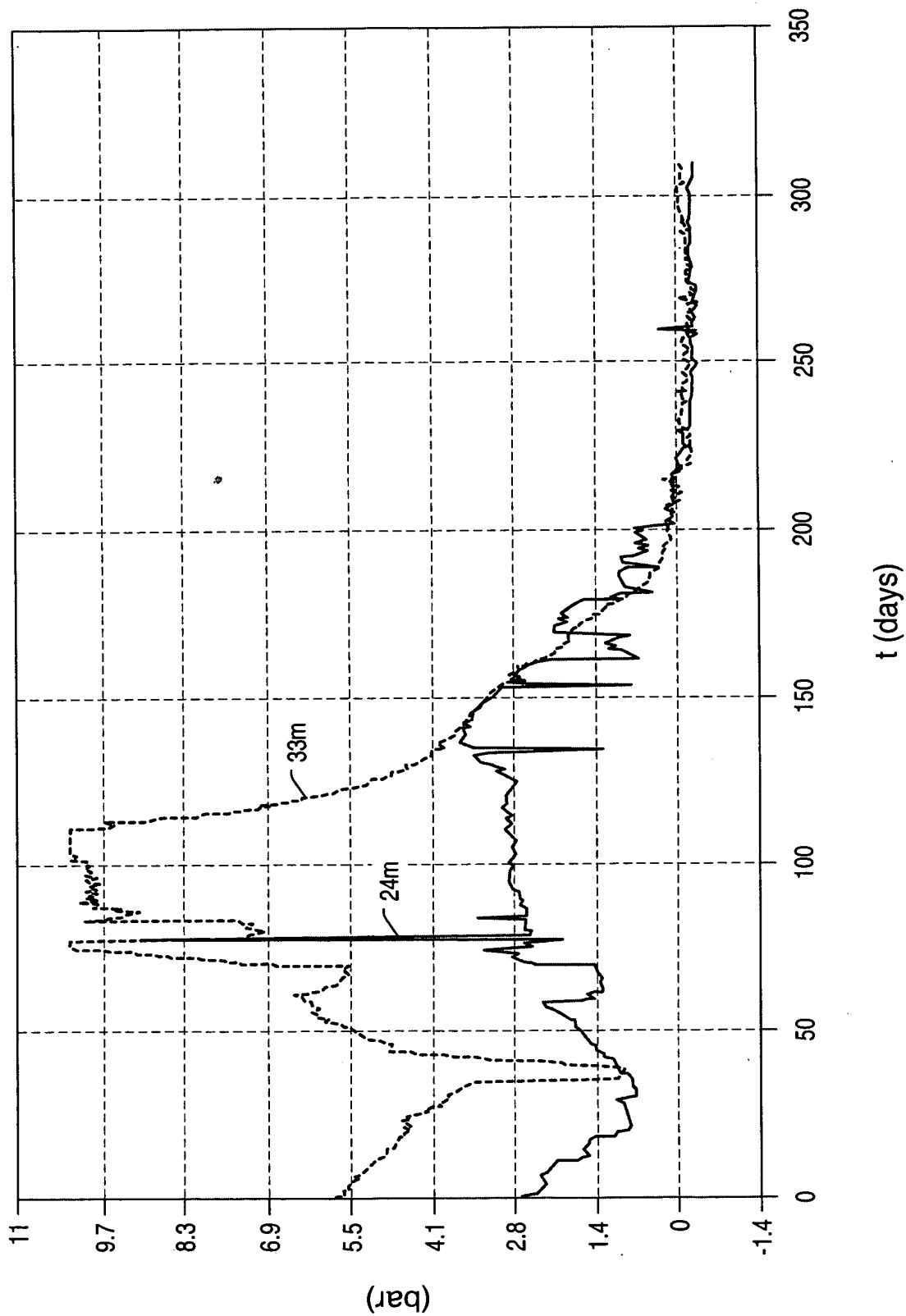


FIG. 107

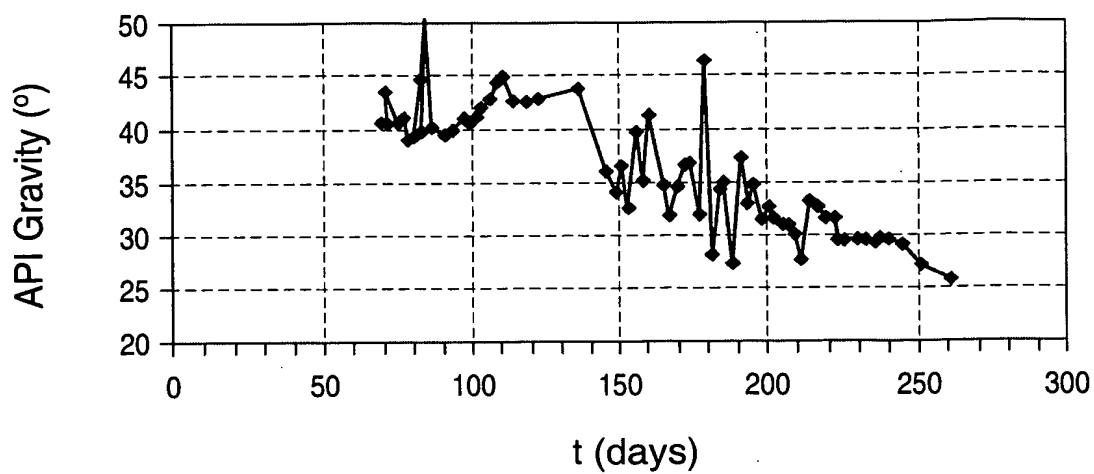


FIG. 108

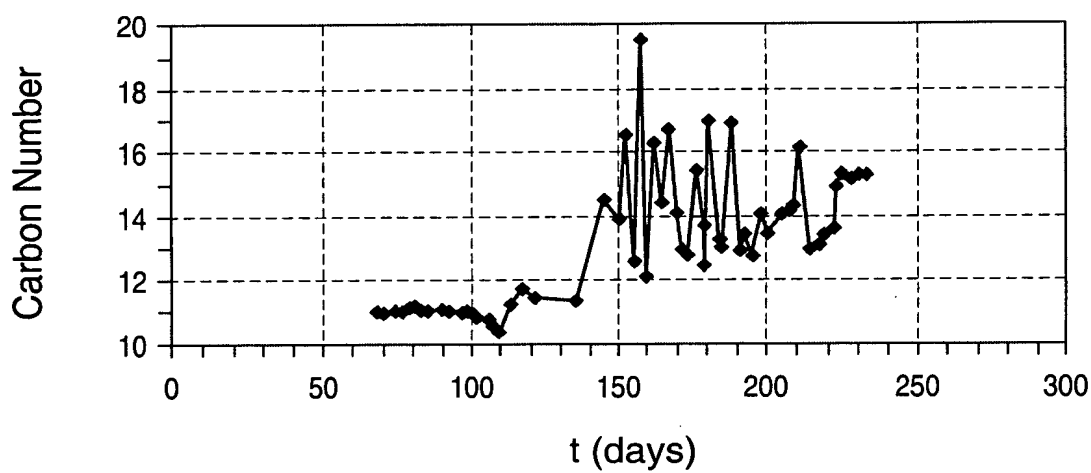


FIG. 109

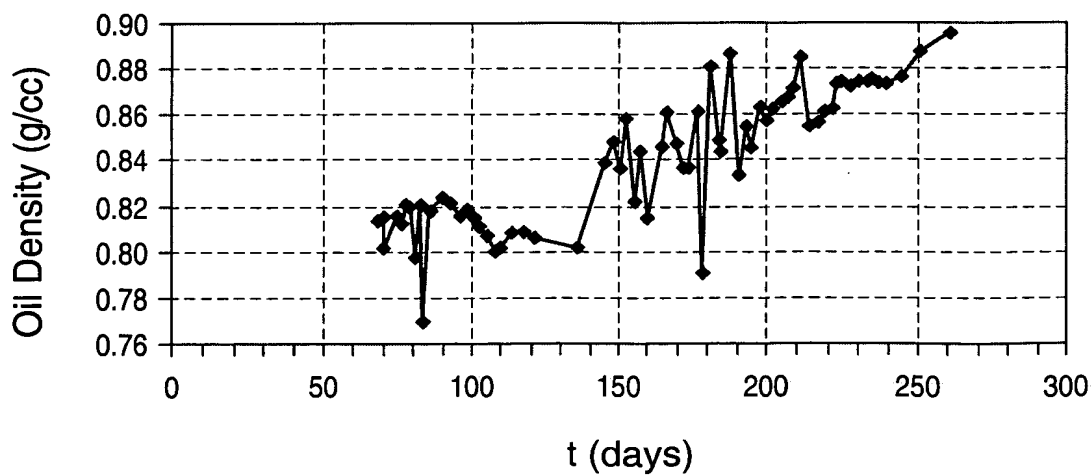


FIG. 110

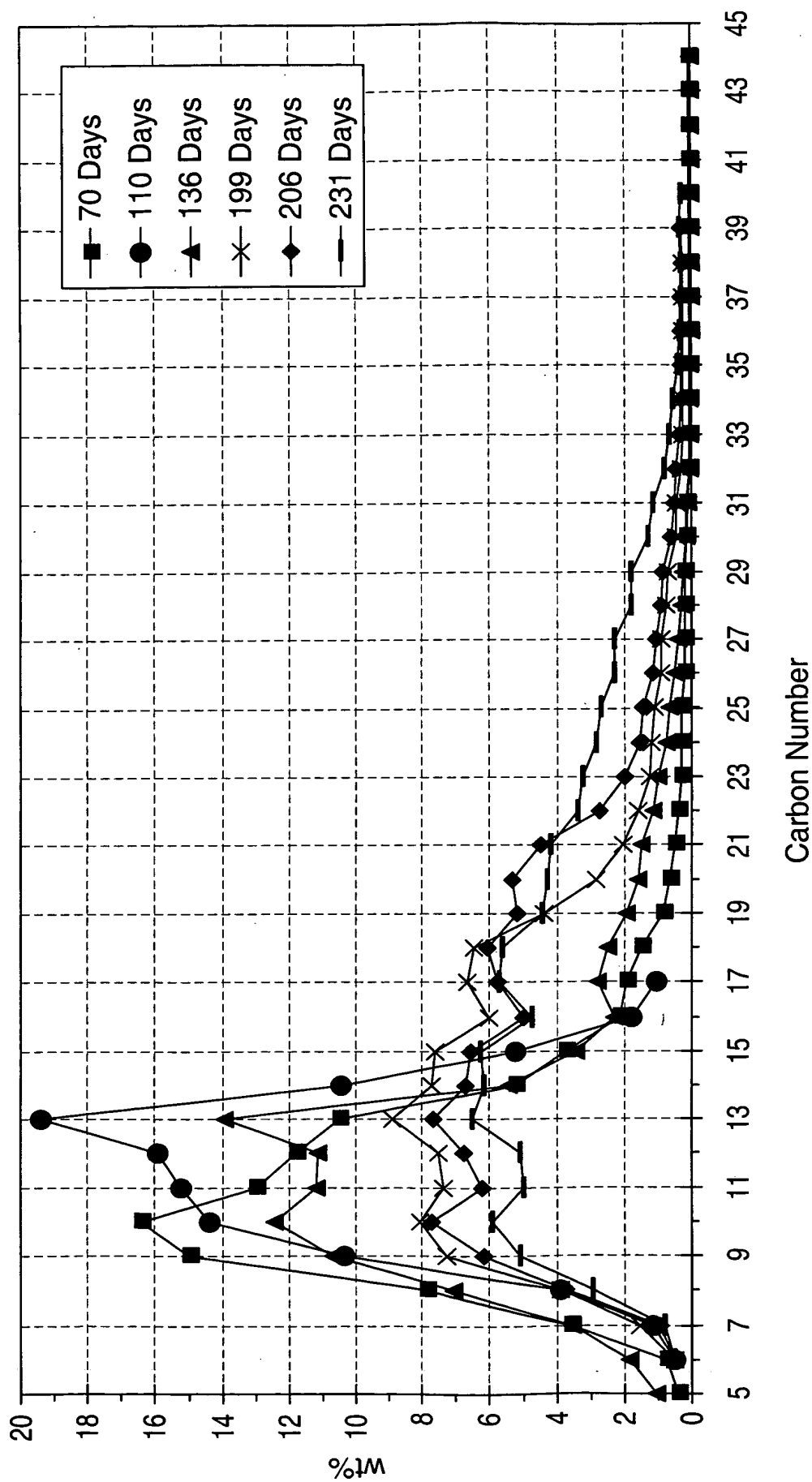


FIG. 111

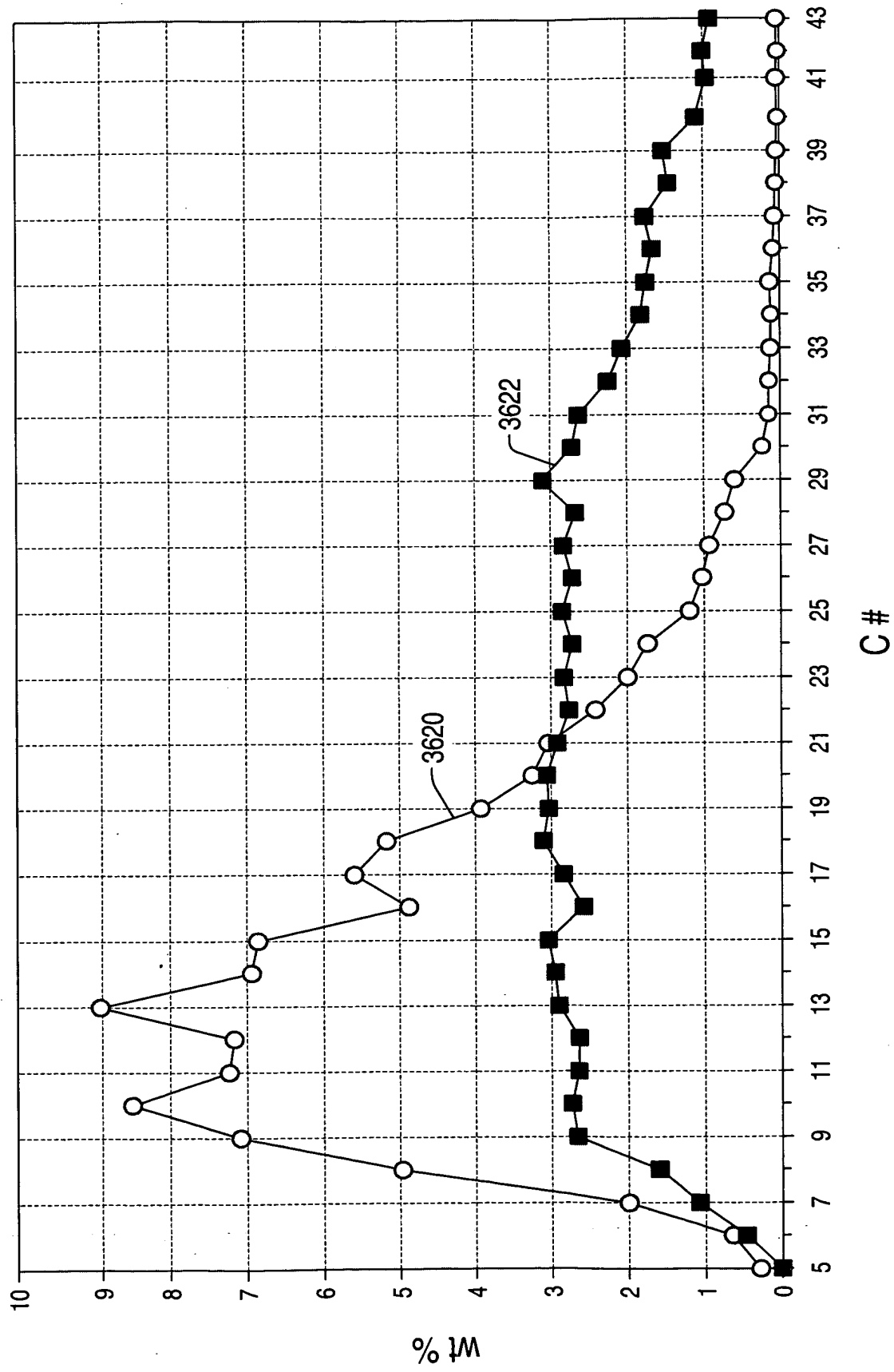


FIG. 112

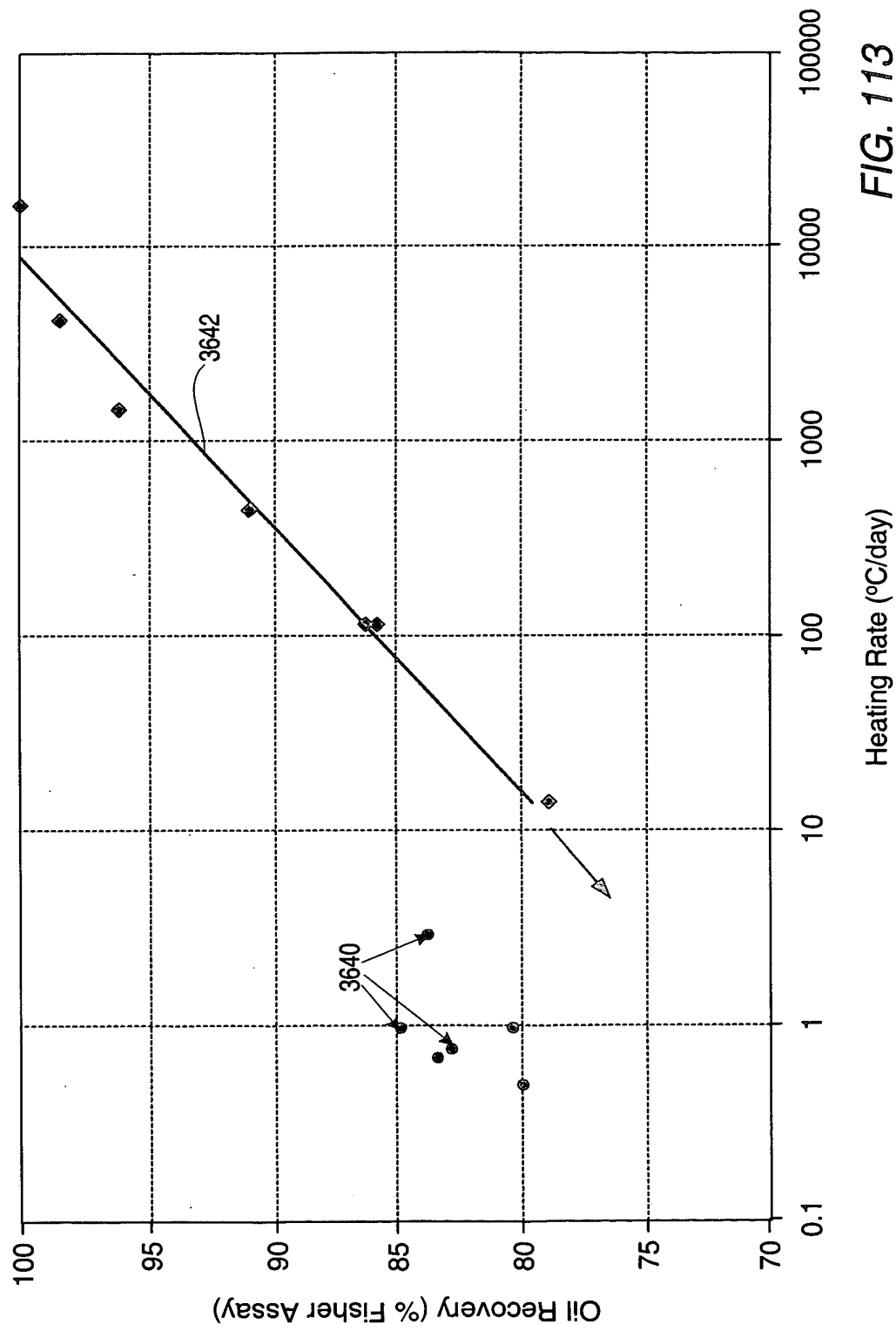


FIG. 113

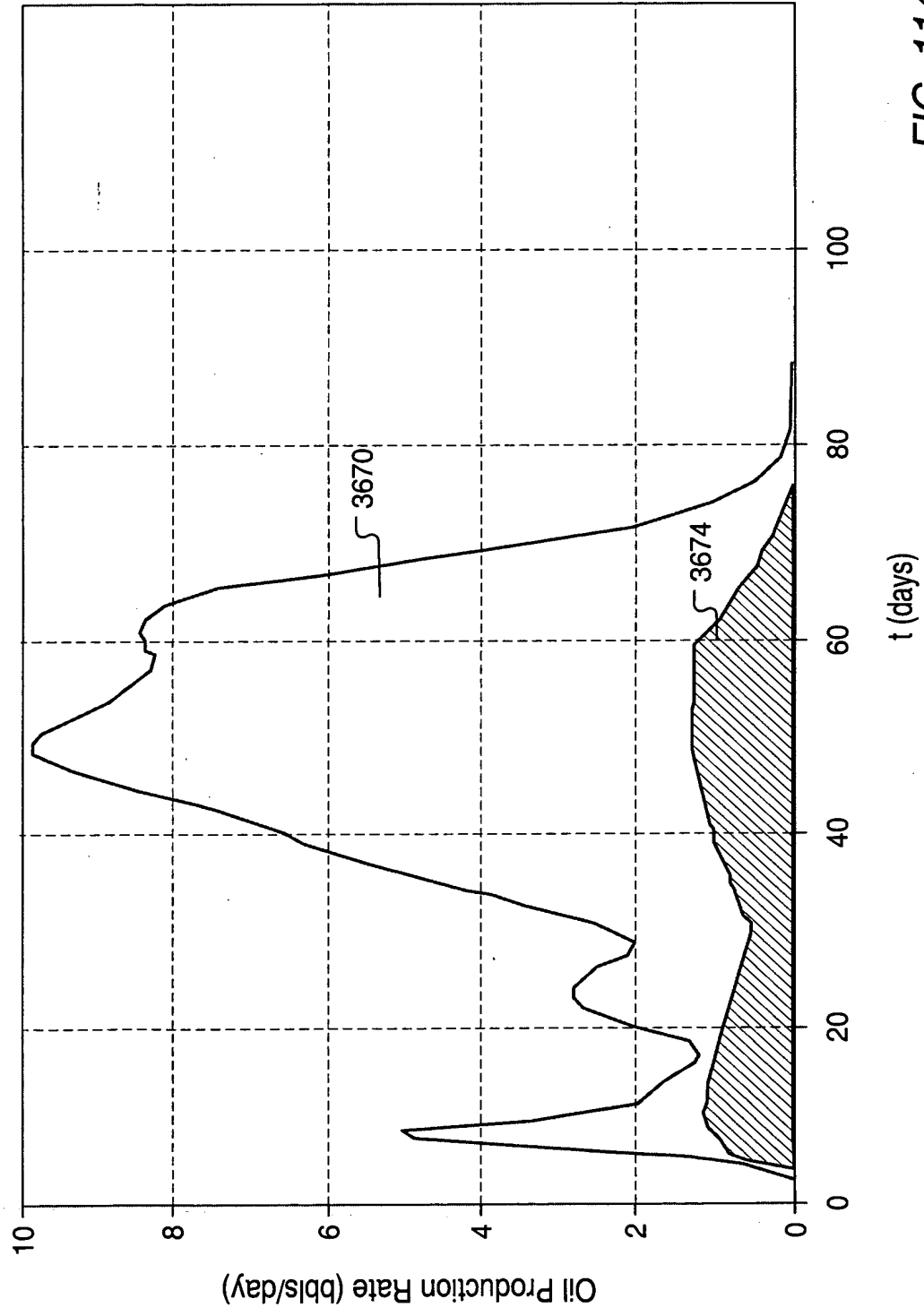


FIG. 114

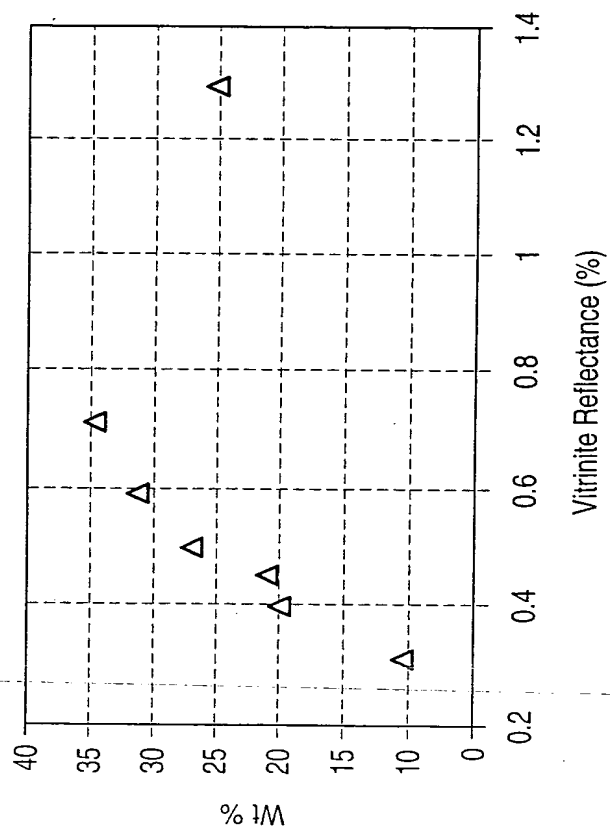


FIG. 115

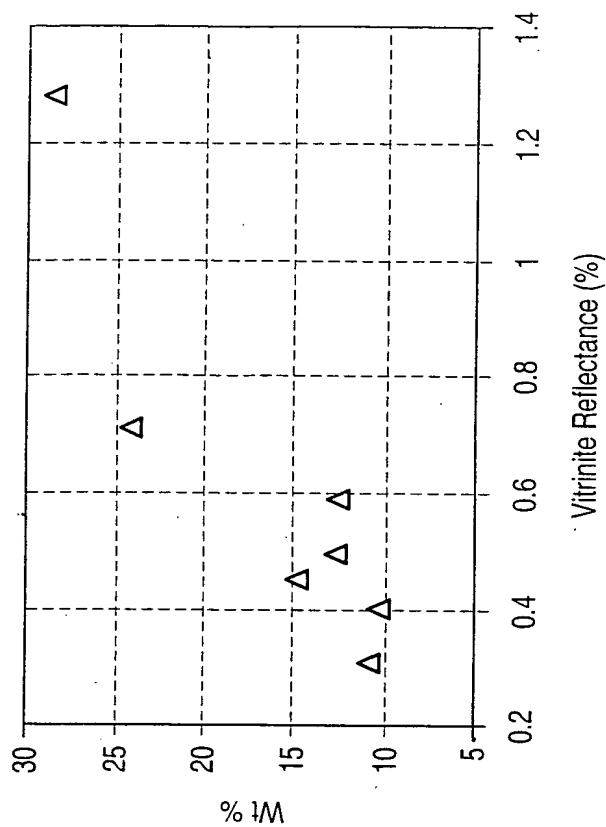


FIG. 116

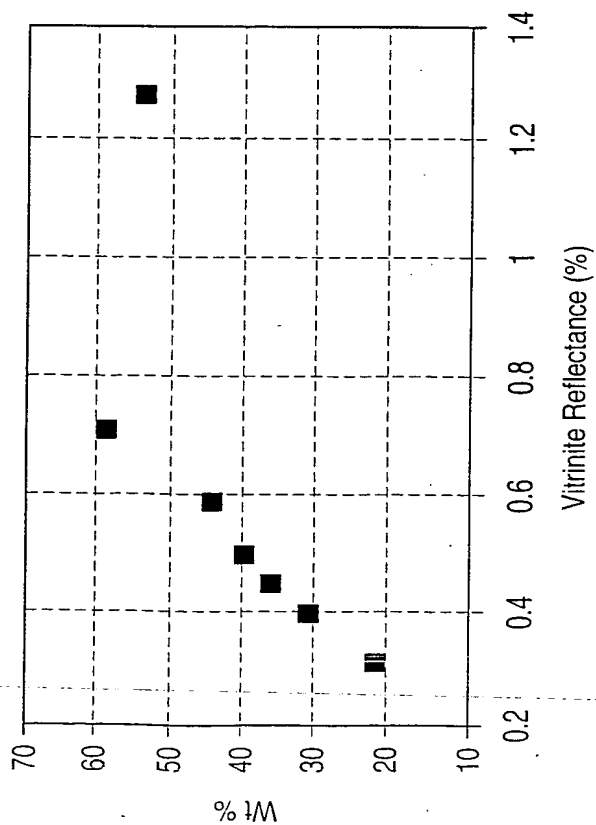


FIG. 117

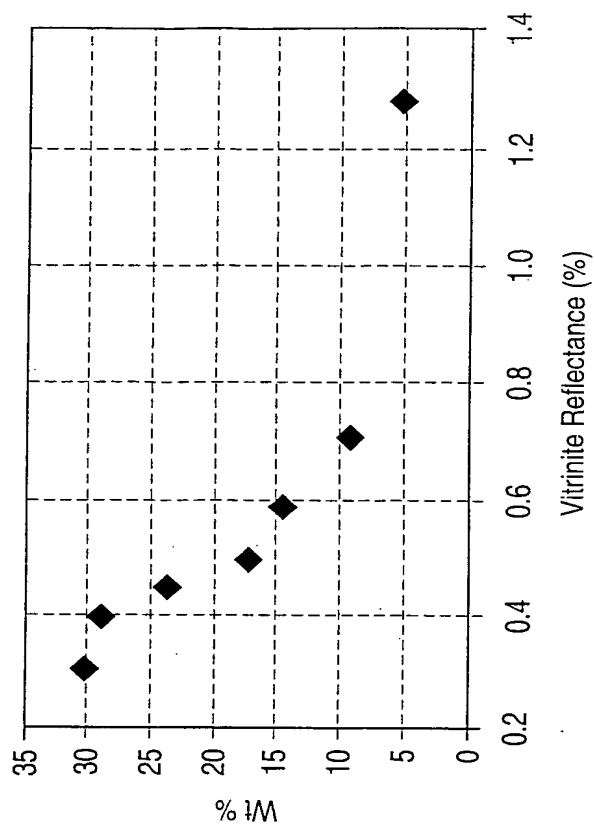


FIG. 118

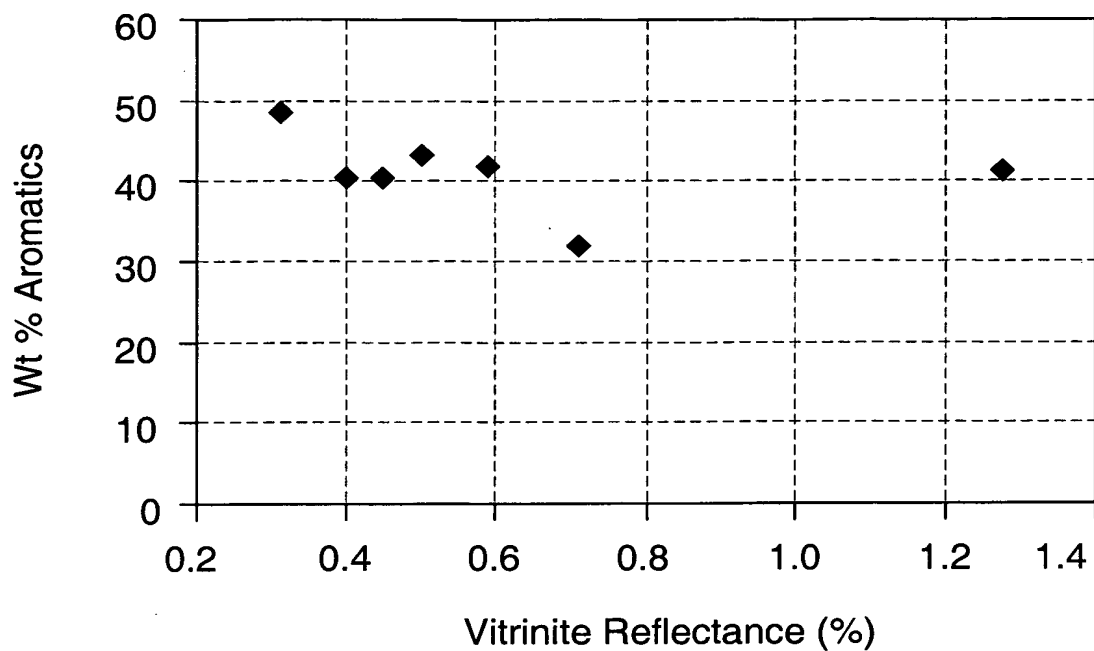


FIG. 119

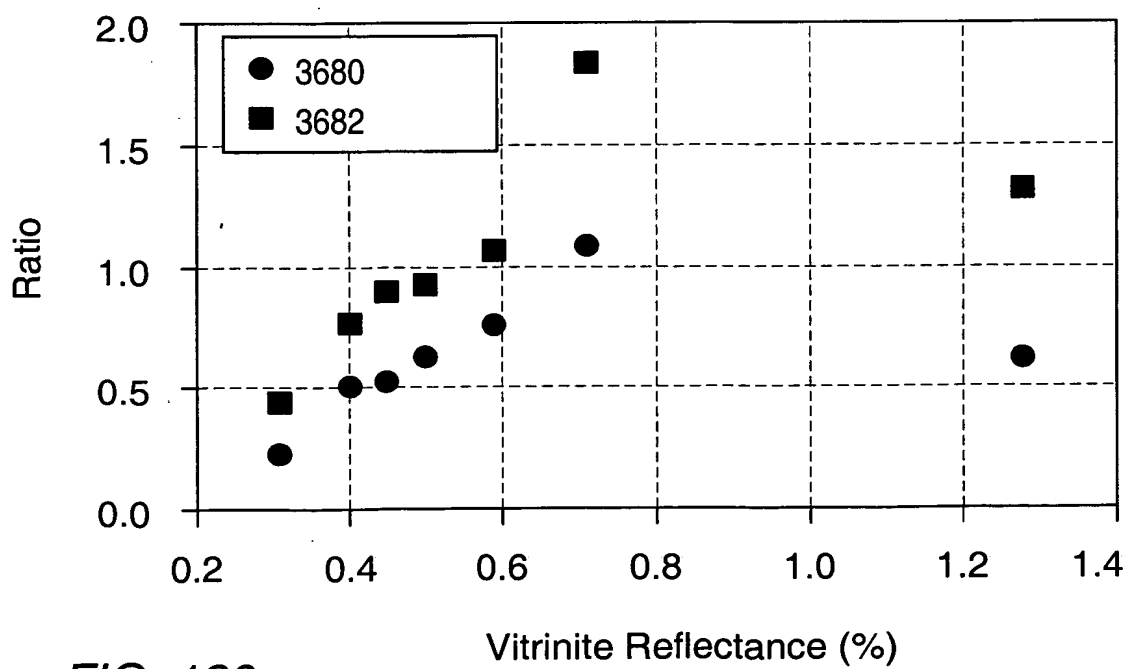


FIG. 120

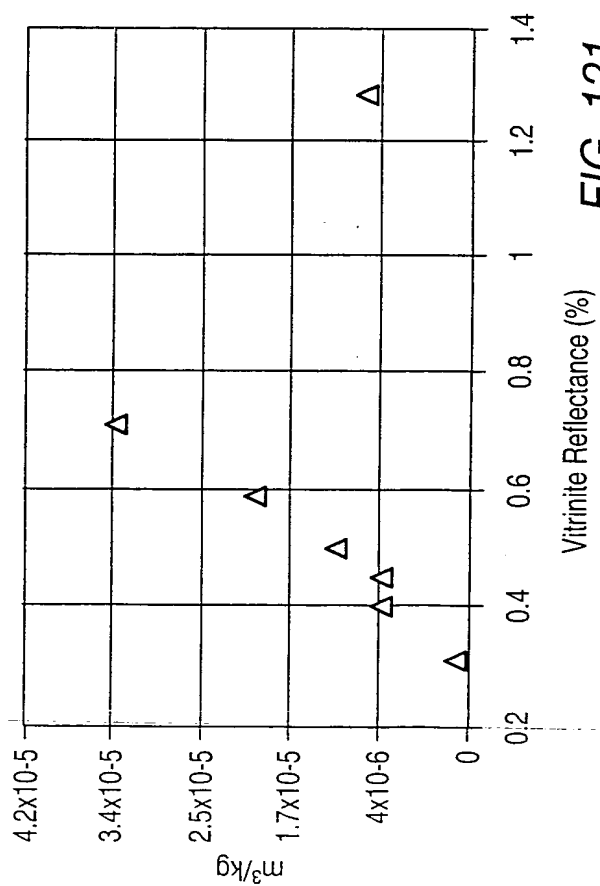


FIG. 121

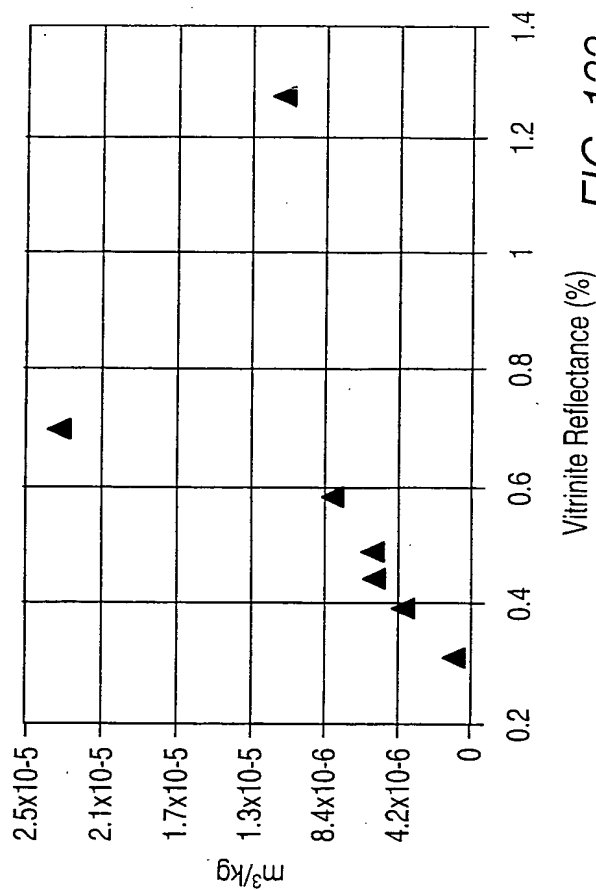


FIG. 122

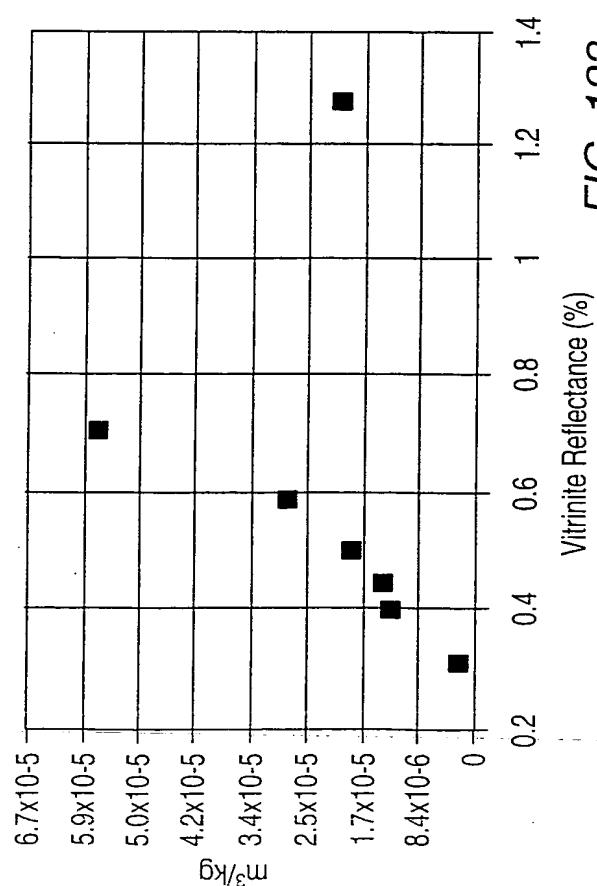


FIG. 123

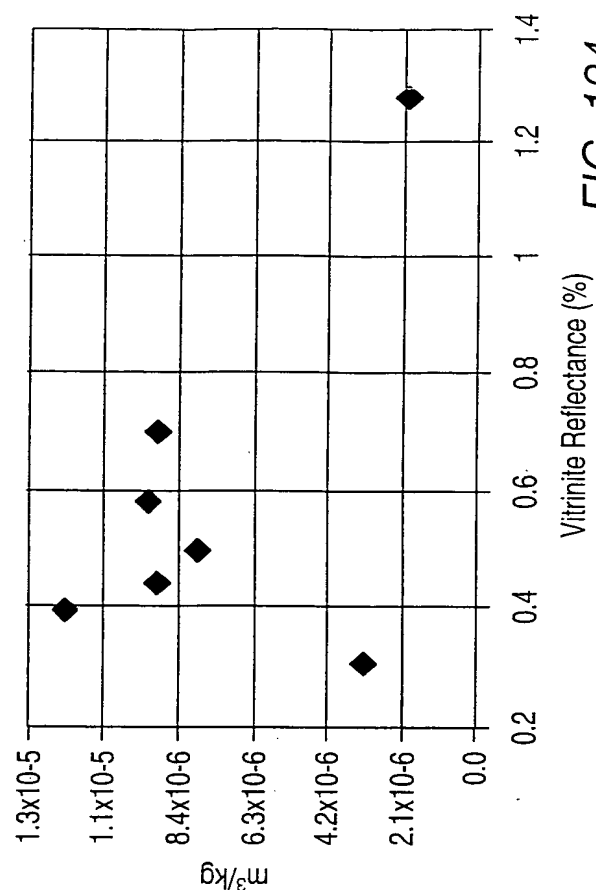


FIG. 124

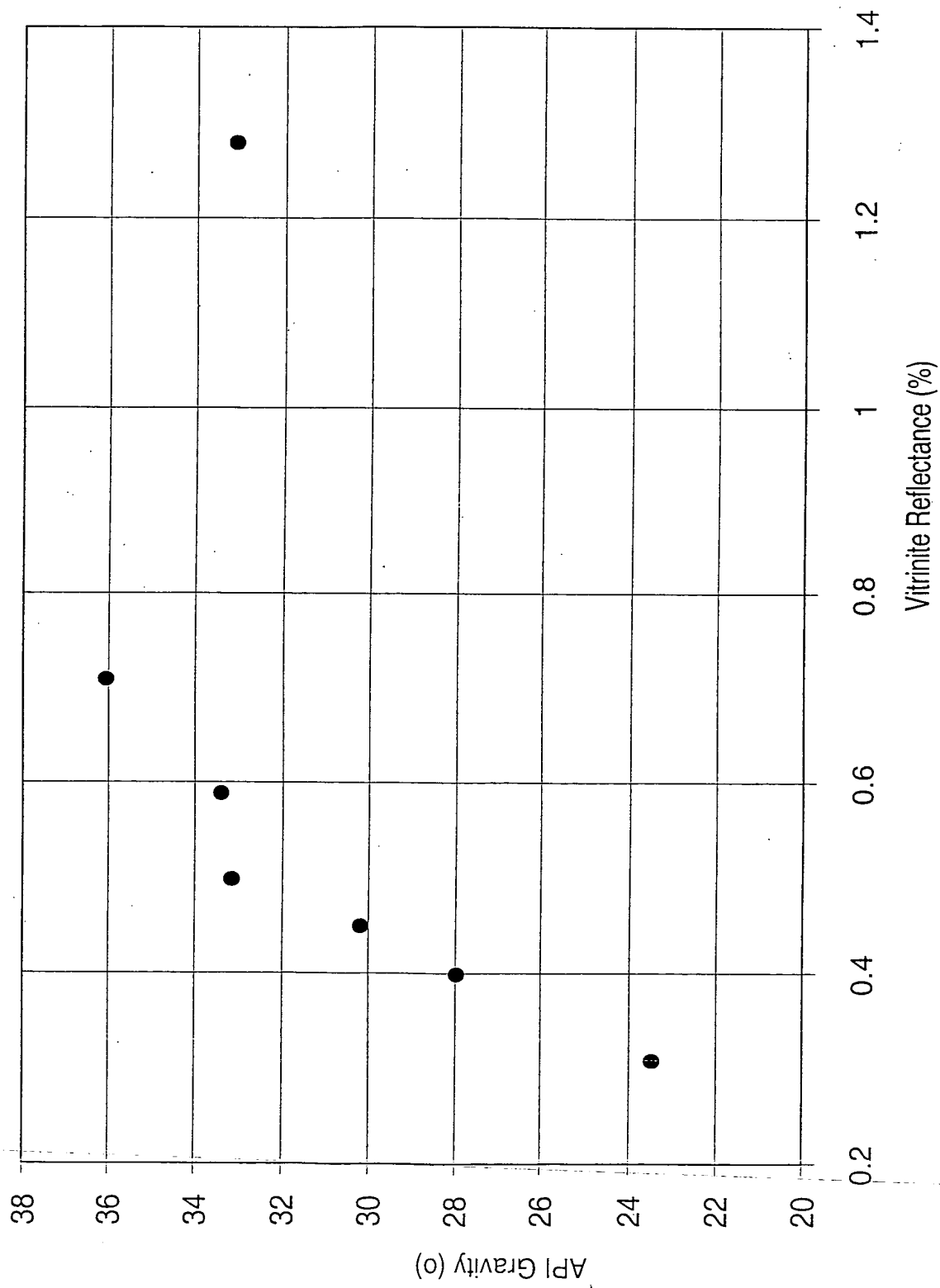
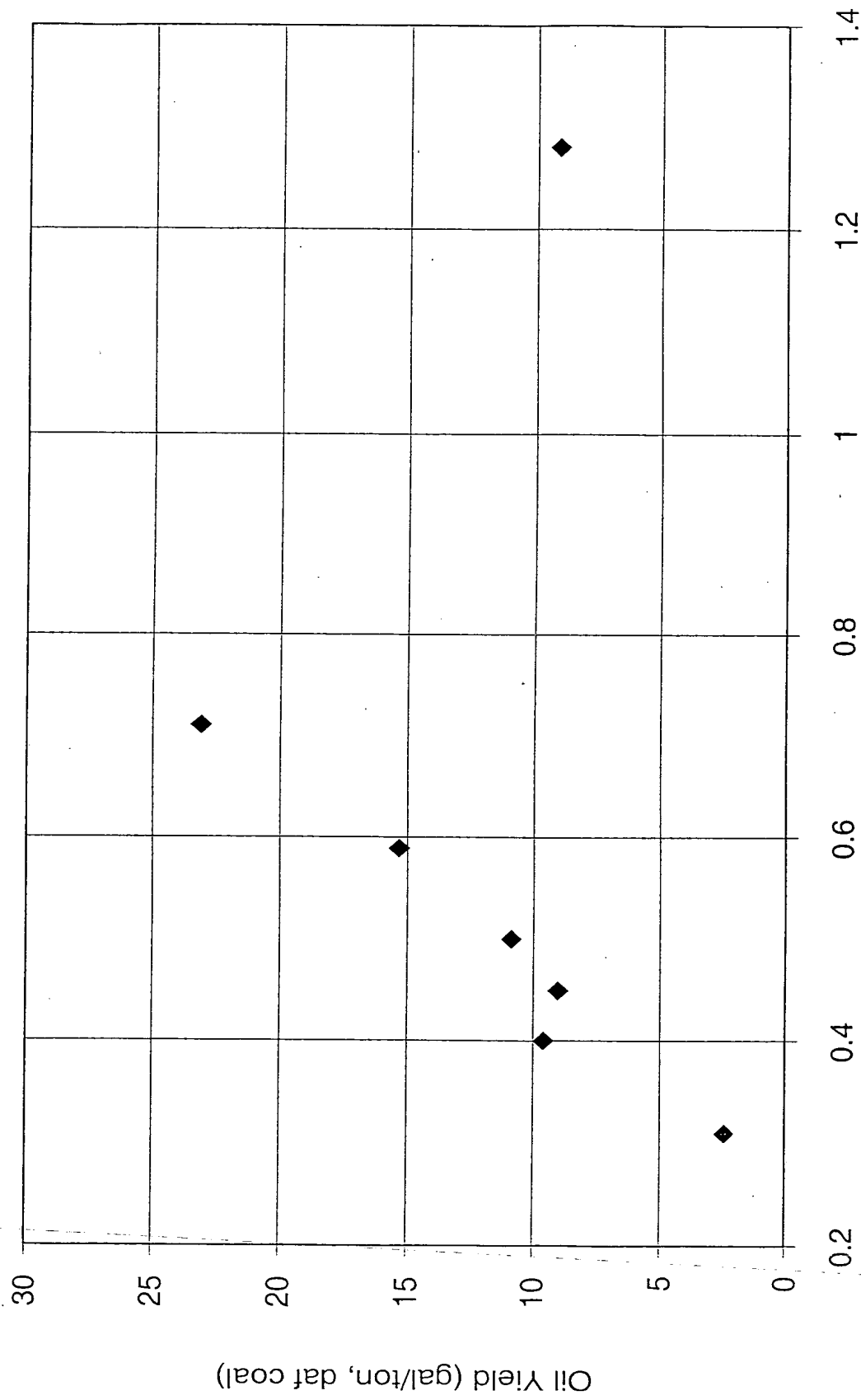


FIG. 125

FOOTNOTES



Vitrinite Reflectance (%)

FIG. 126

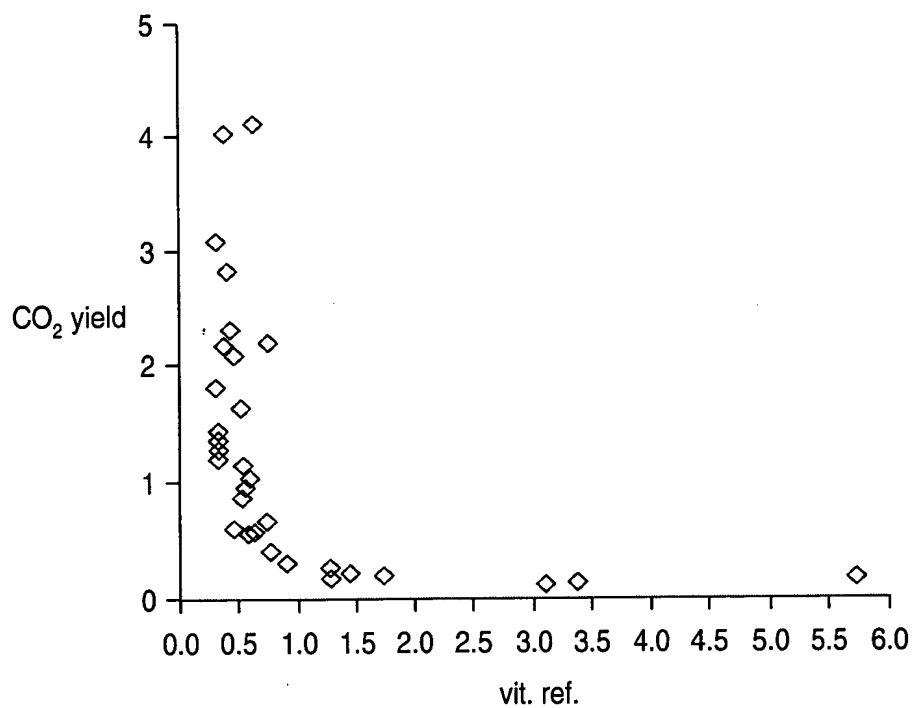


FIG. 127

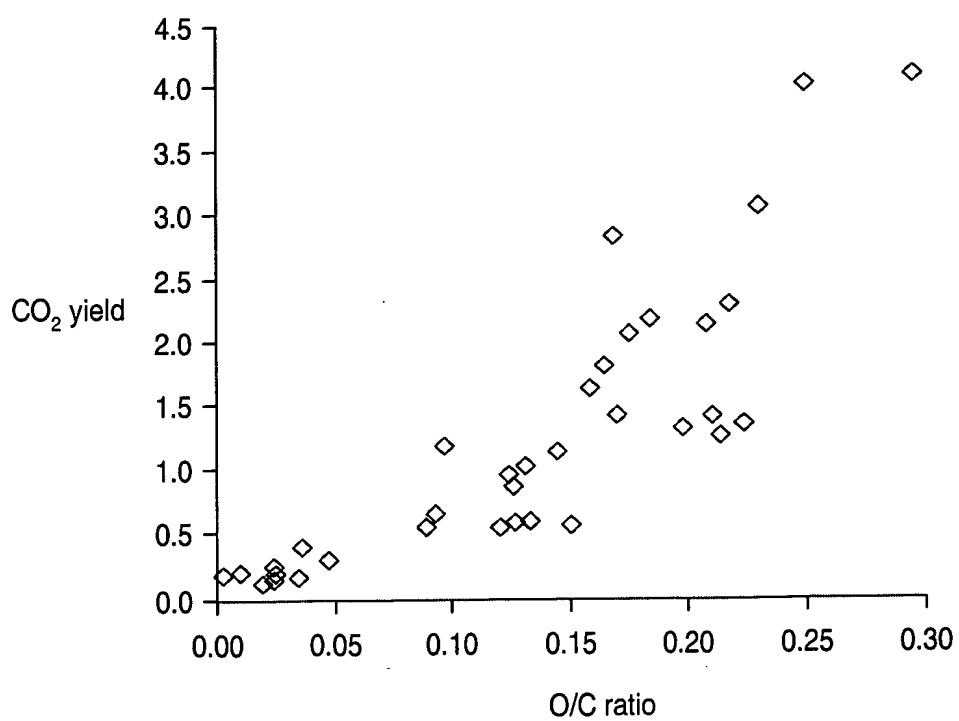


FIG. 128

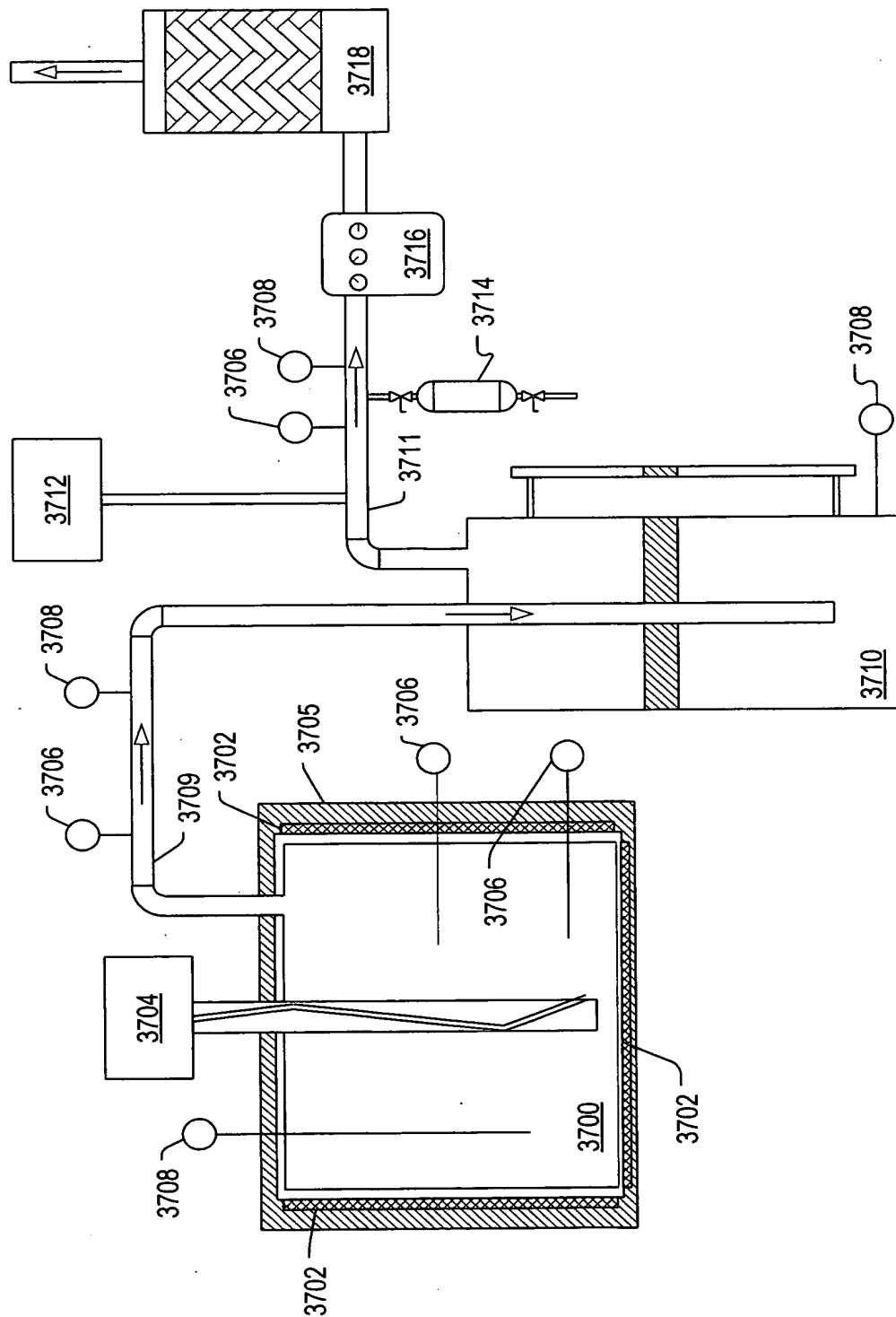


FIG. 129

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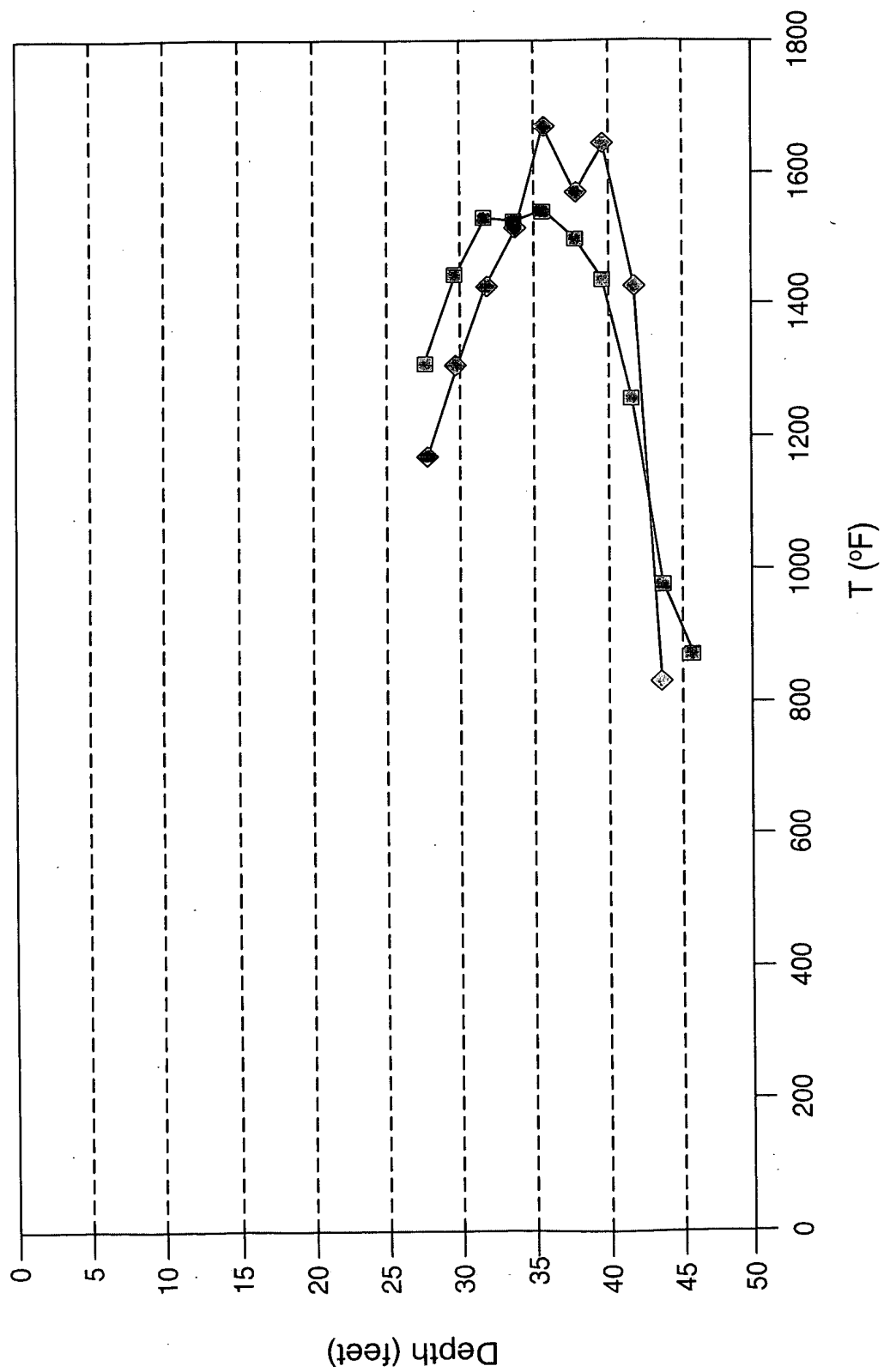


FIG. 130

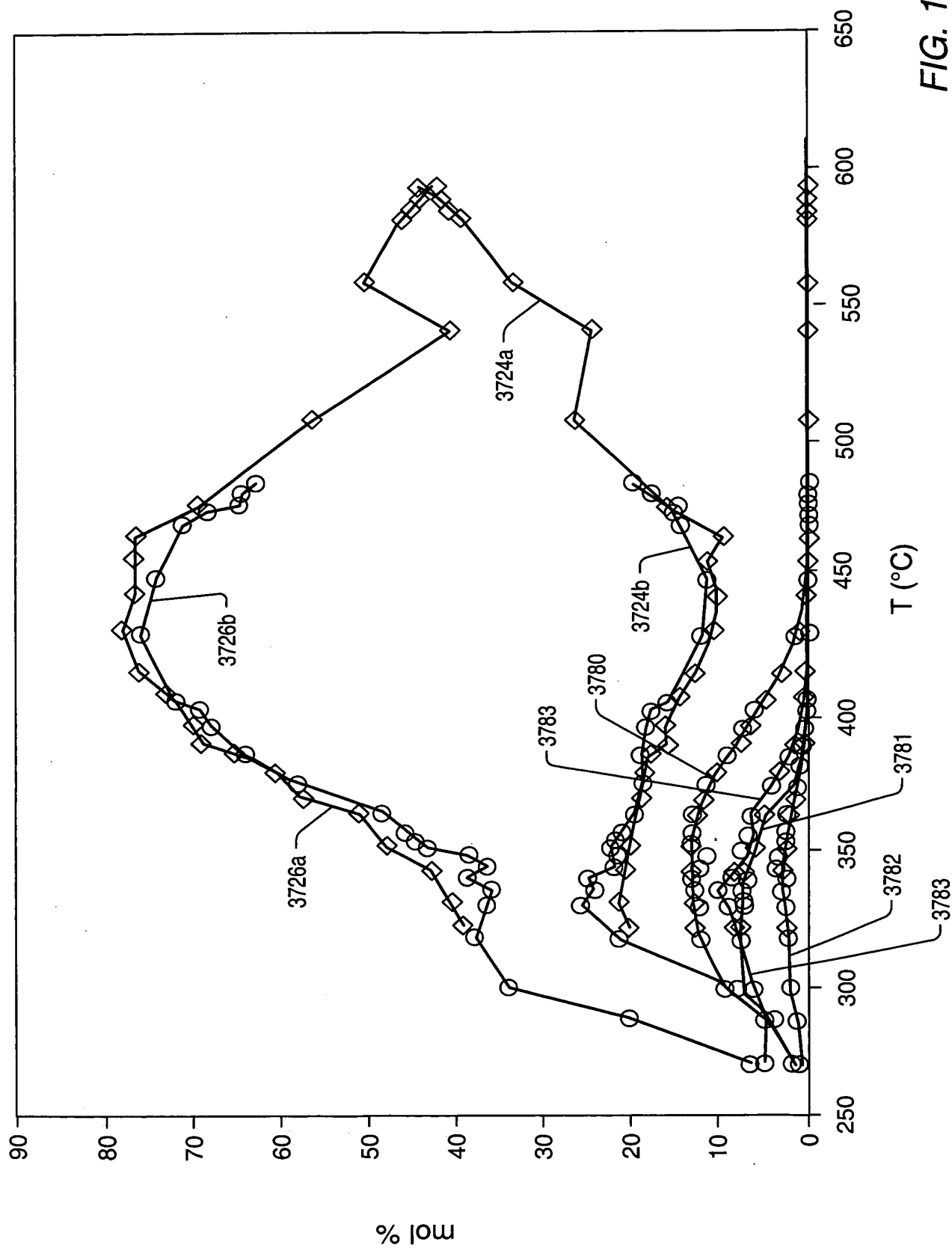


FIG. 131

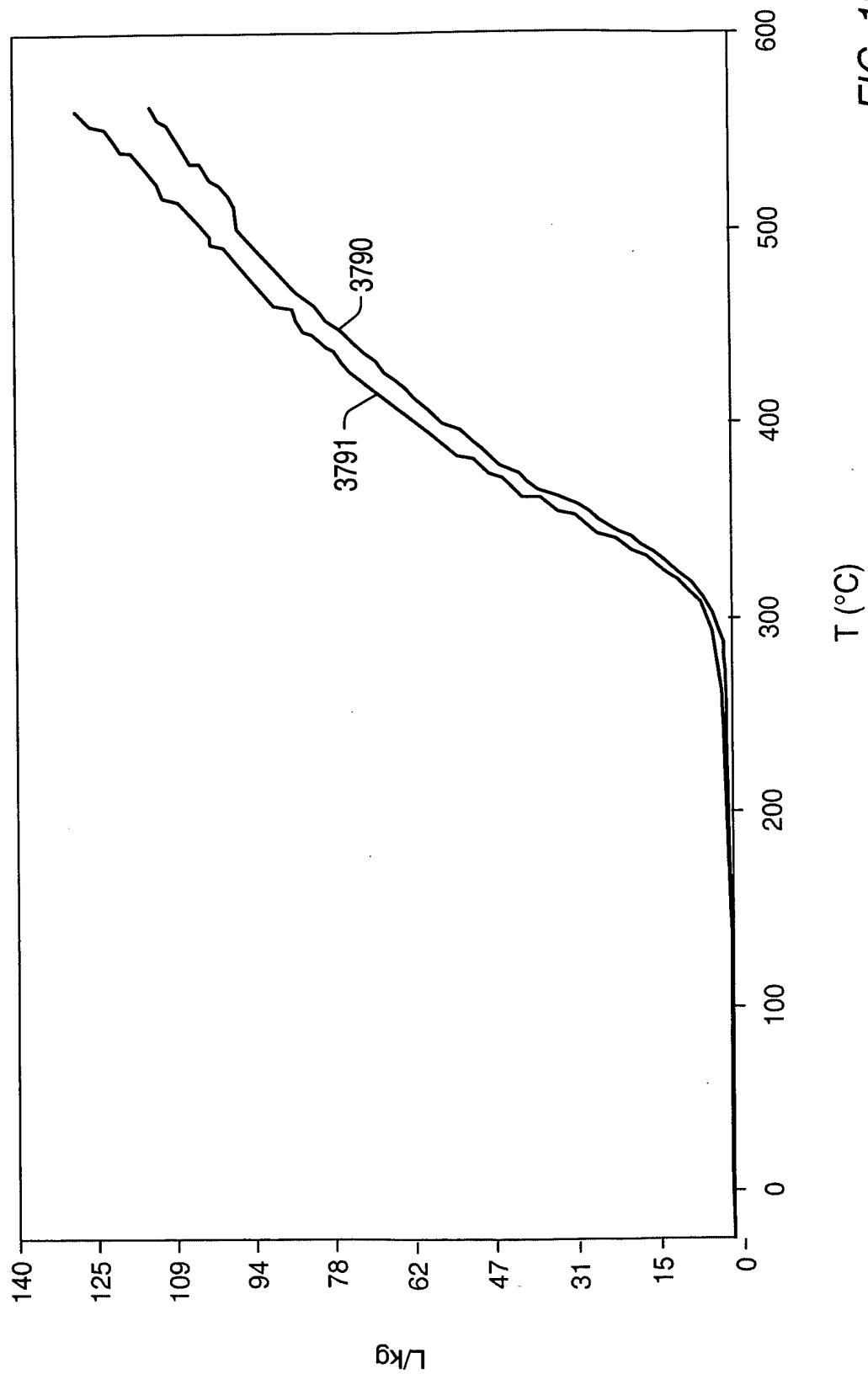


FIG. 132

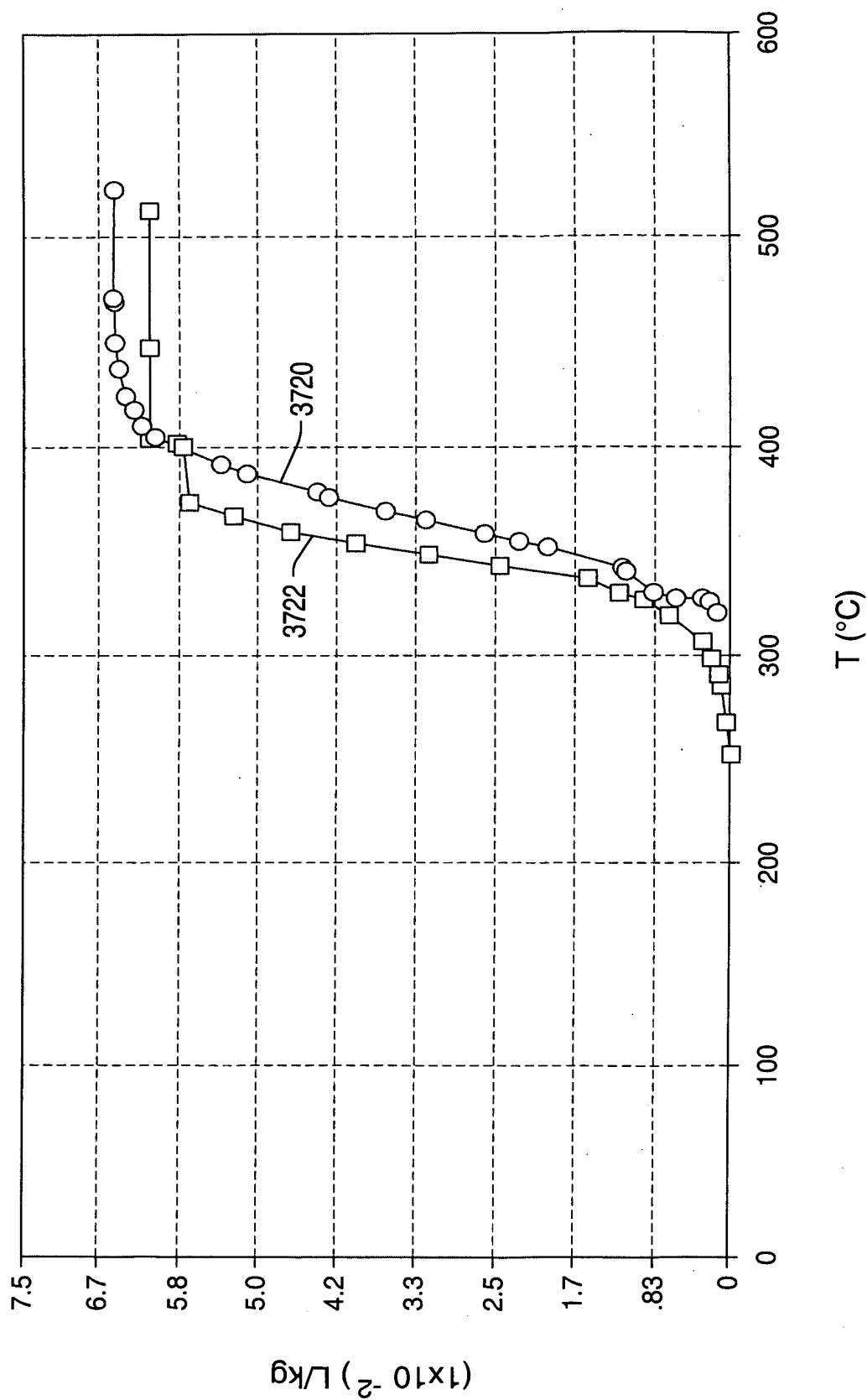


FIG. 133

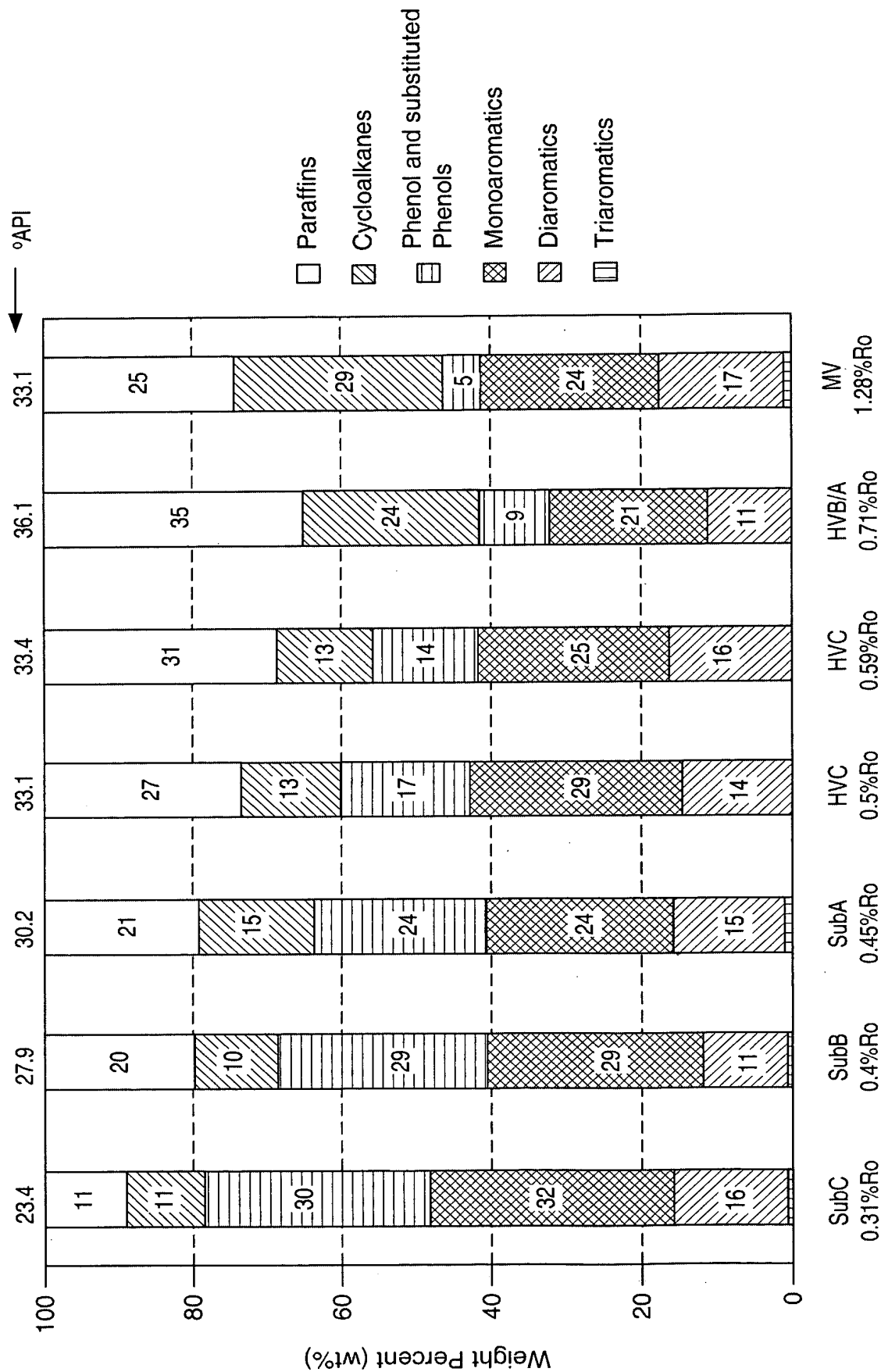


FIG. 134

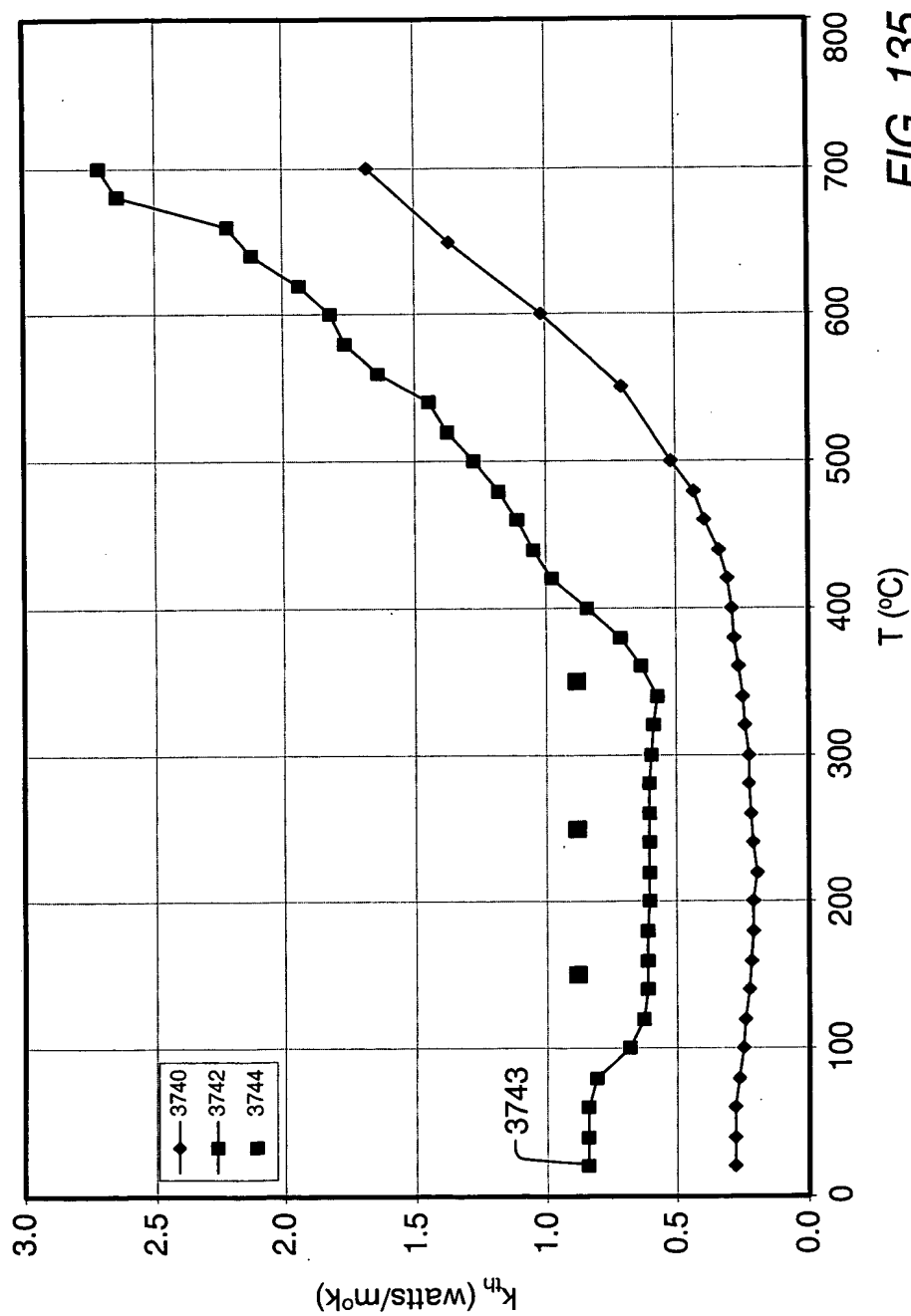


FIG. 135

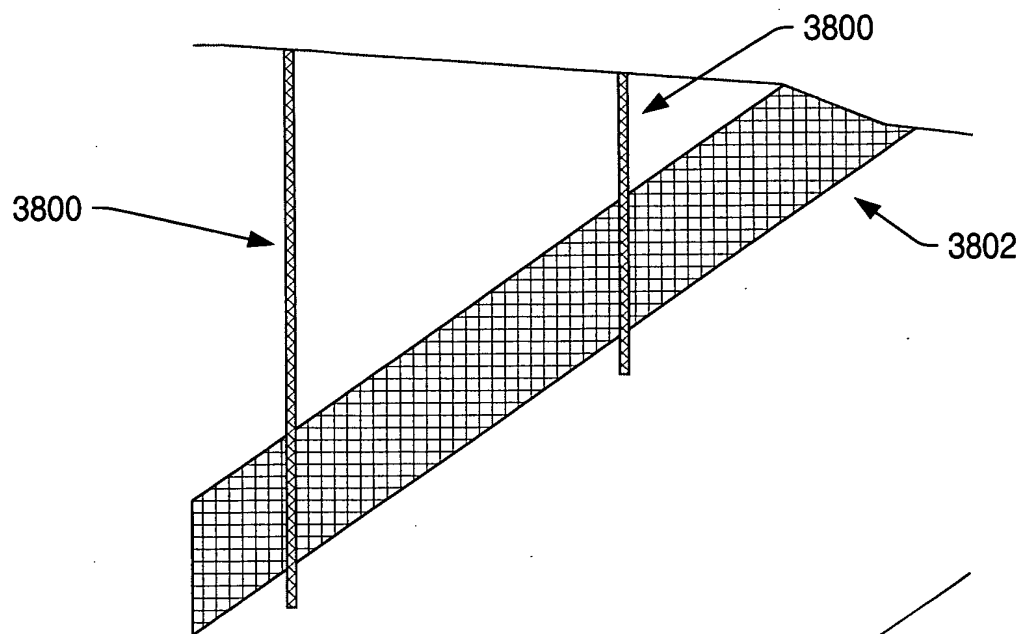


FIG. 136

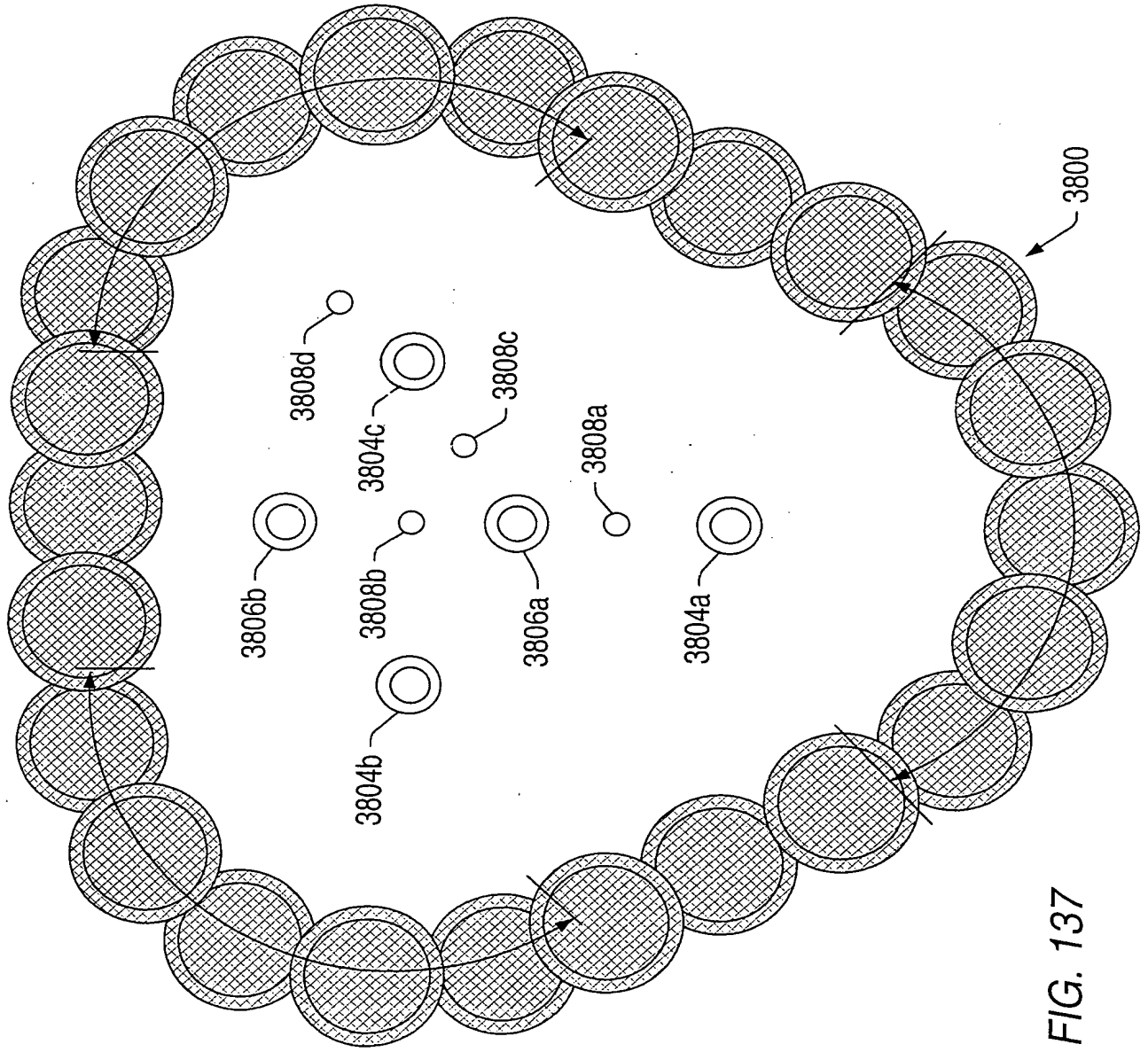


FIG. 137

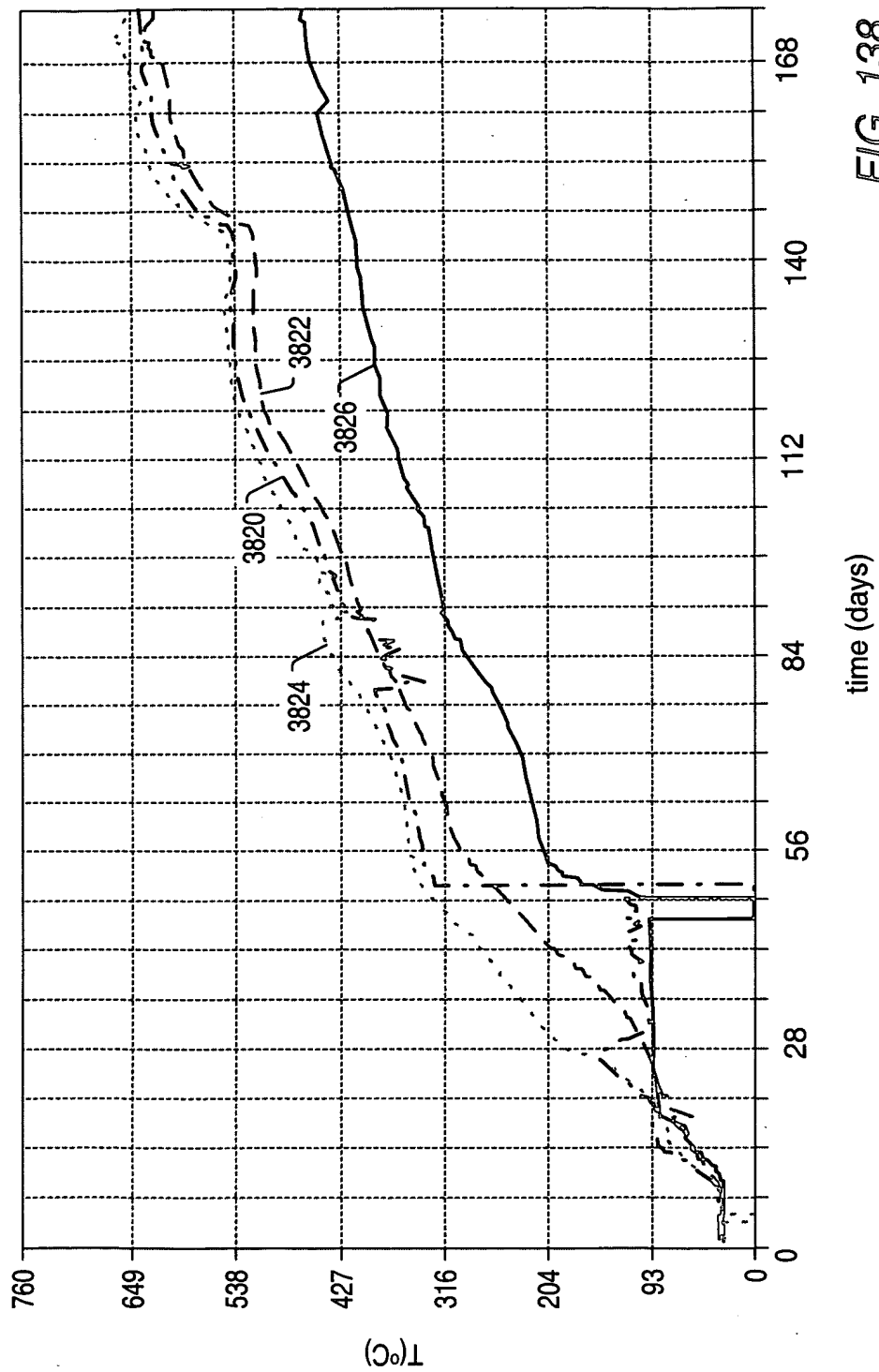


FIG. 138

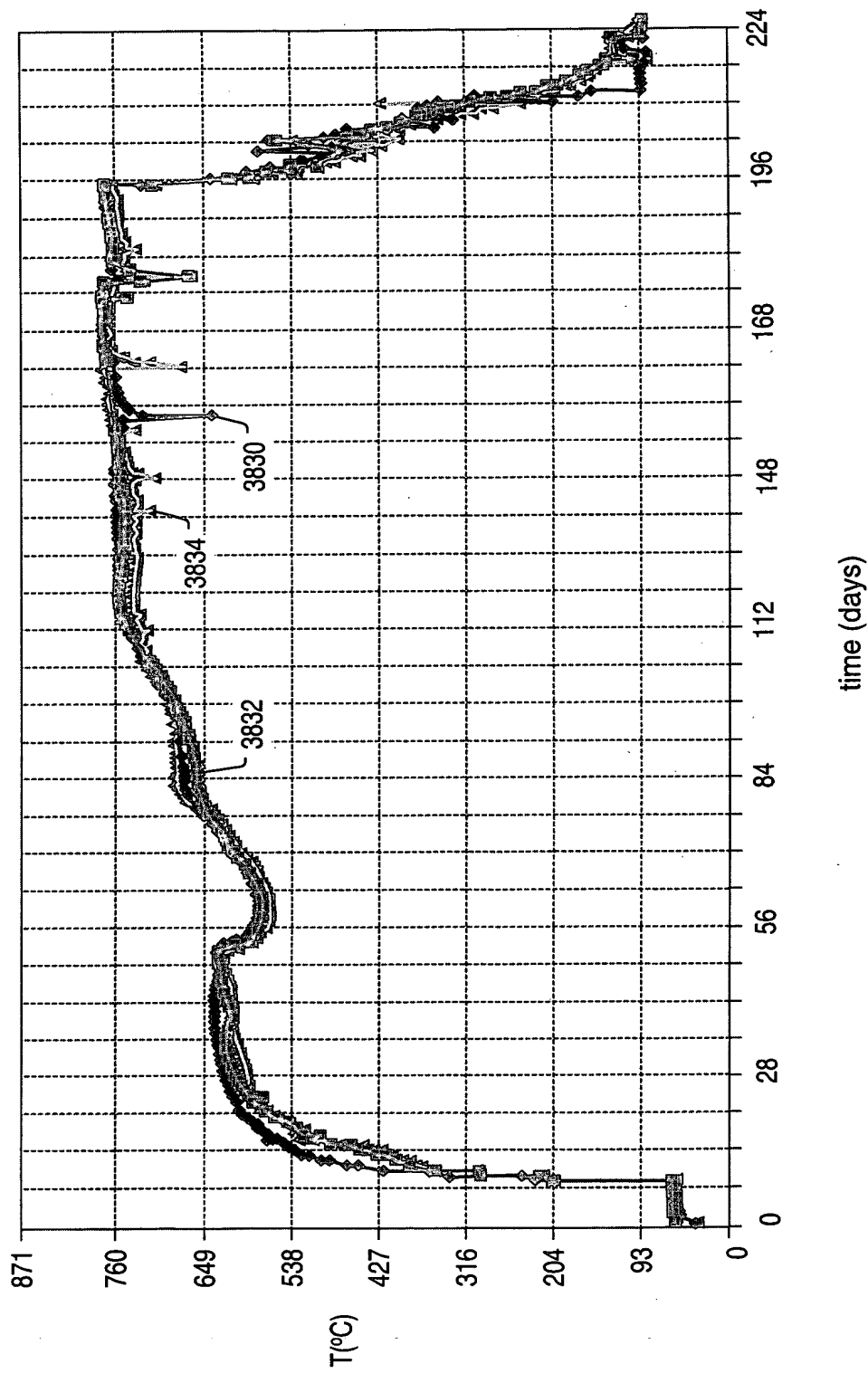
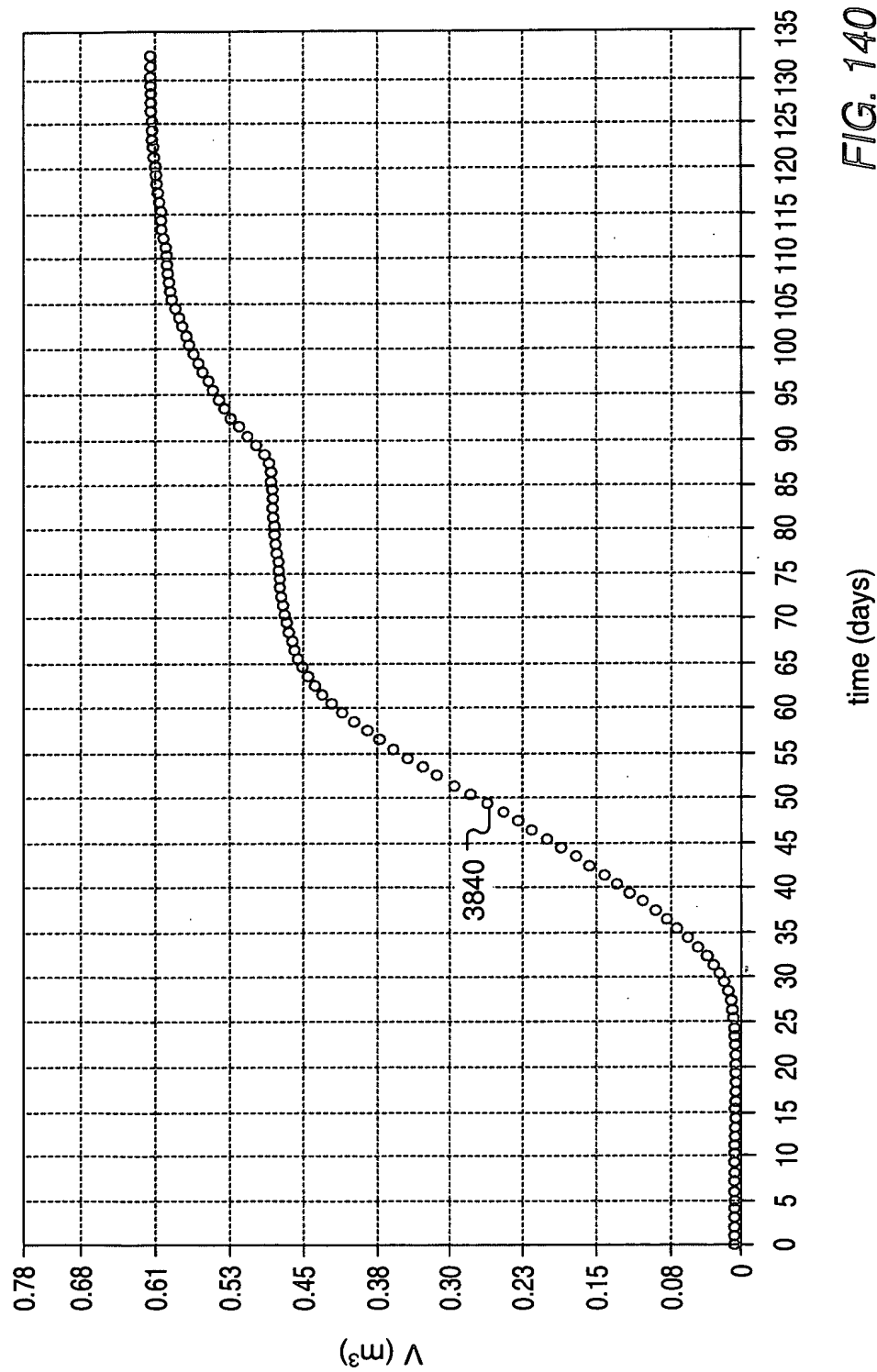


FIG. 139



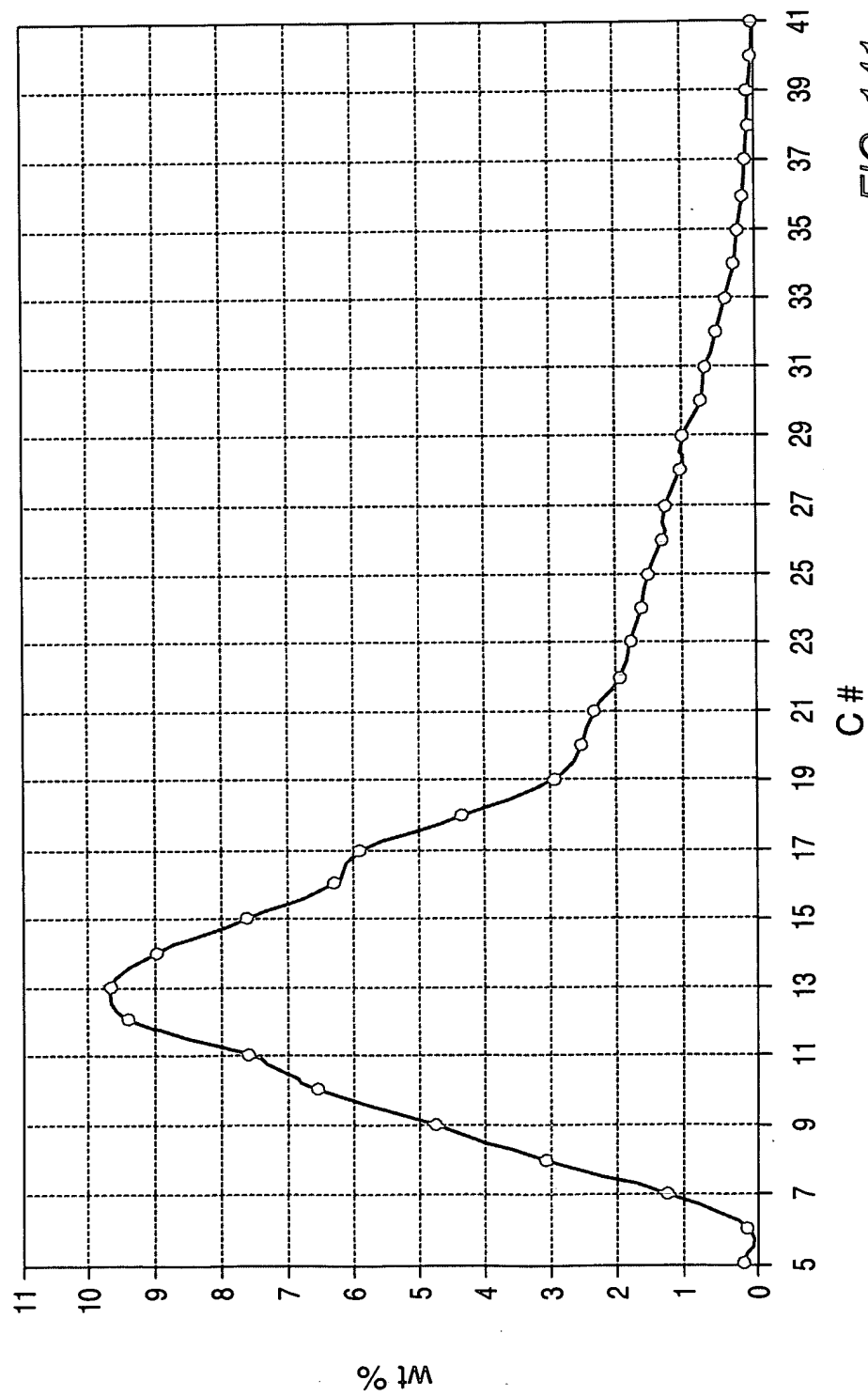


FIG. 141

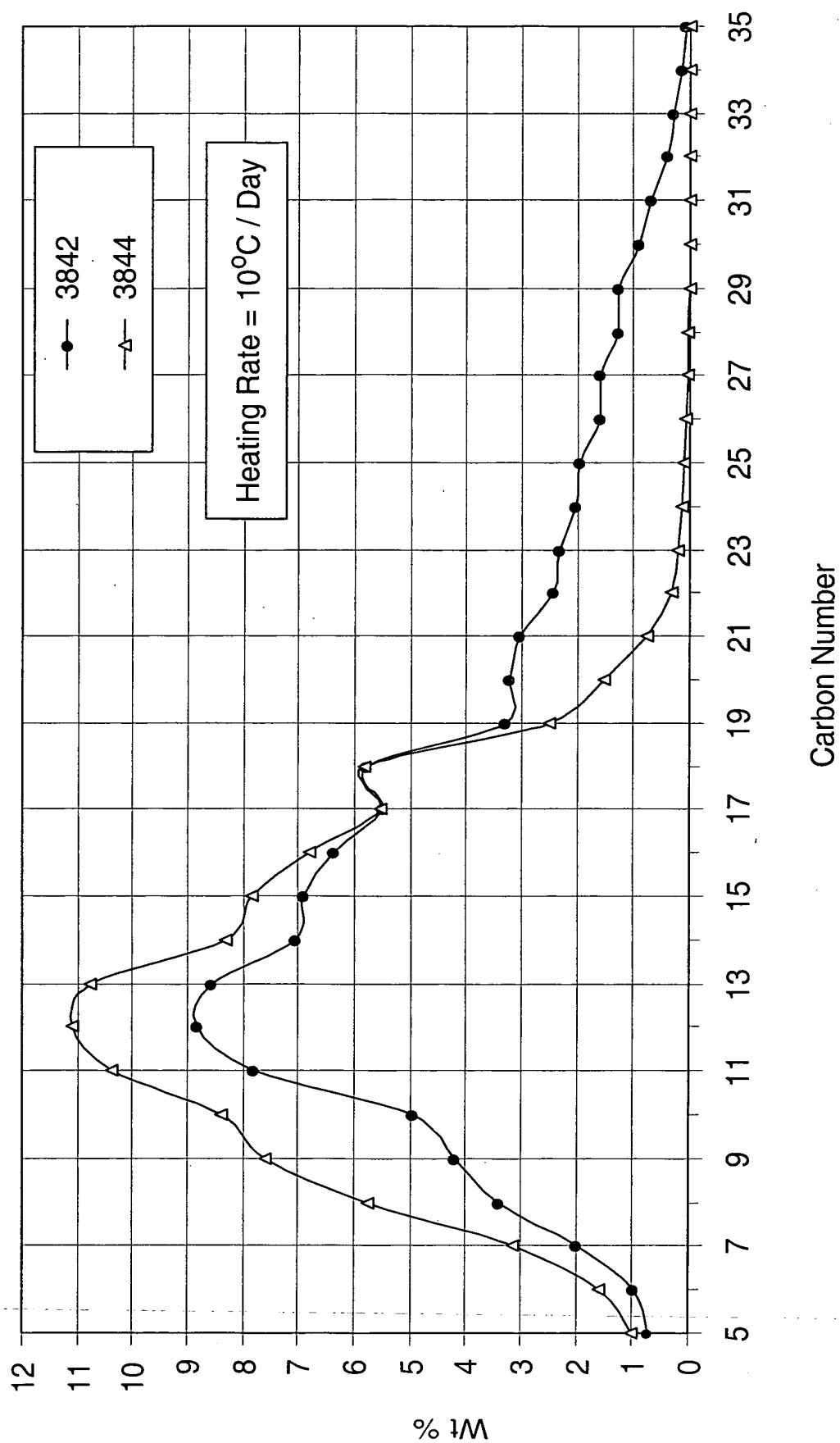


FIG. 142

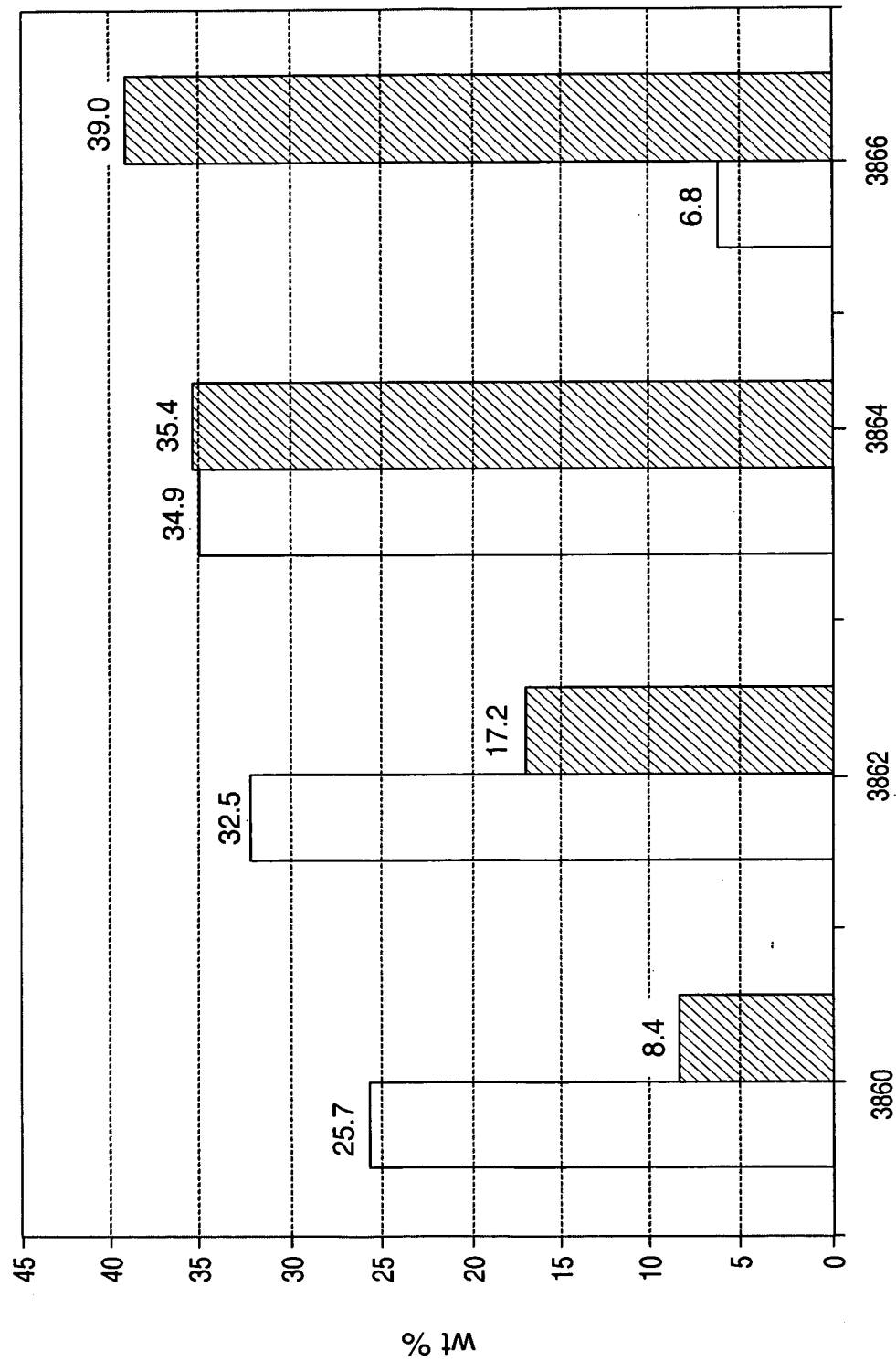


FIG. 143

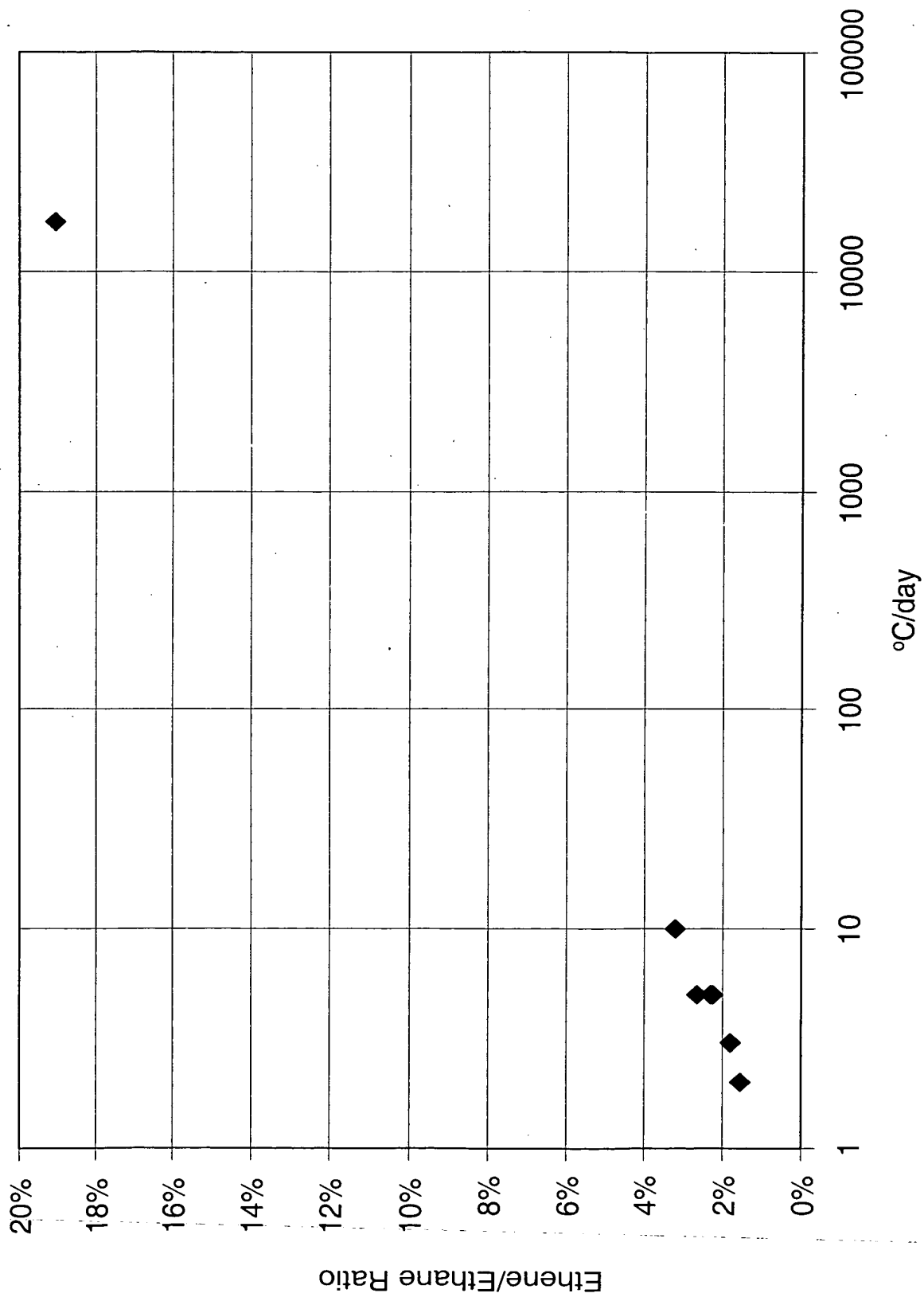


FIG. 144

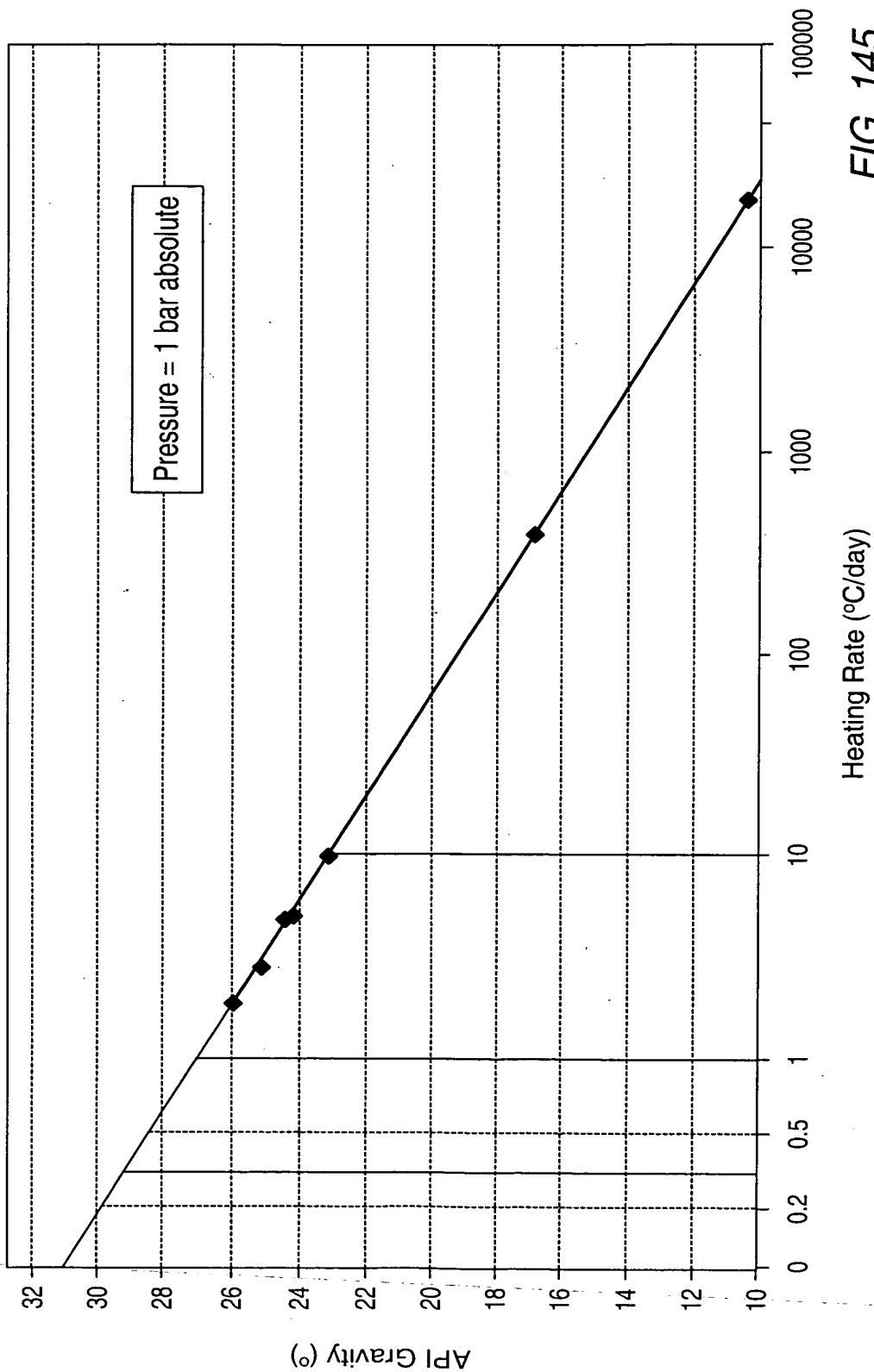


FIG. 145

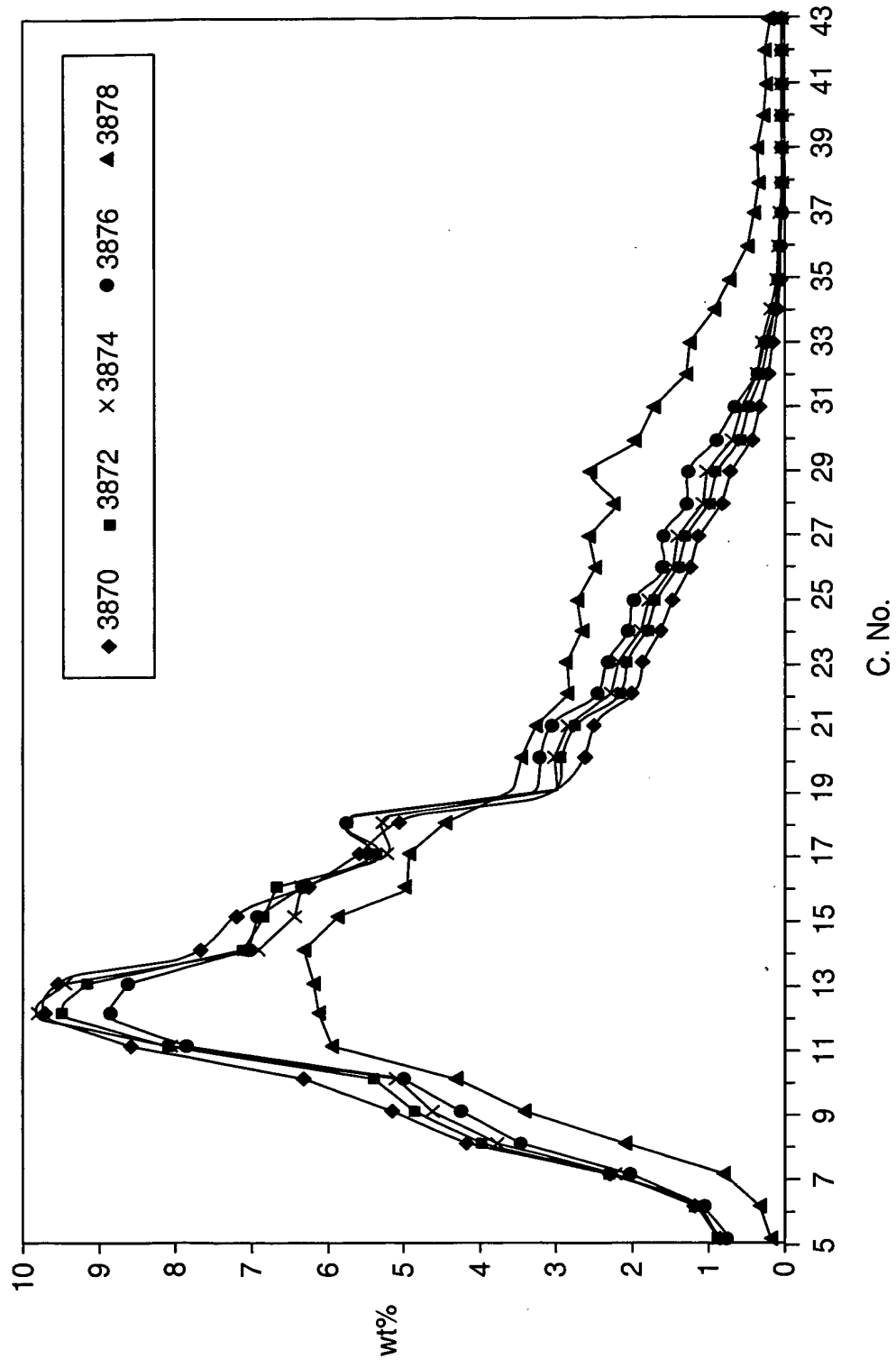


FIG. 146

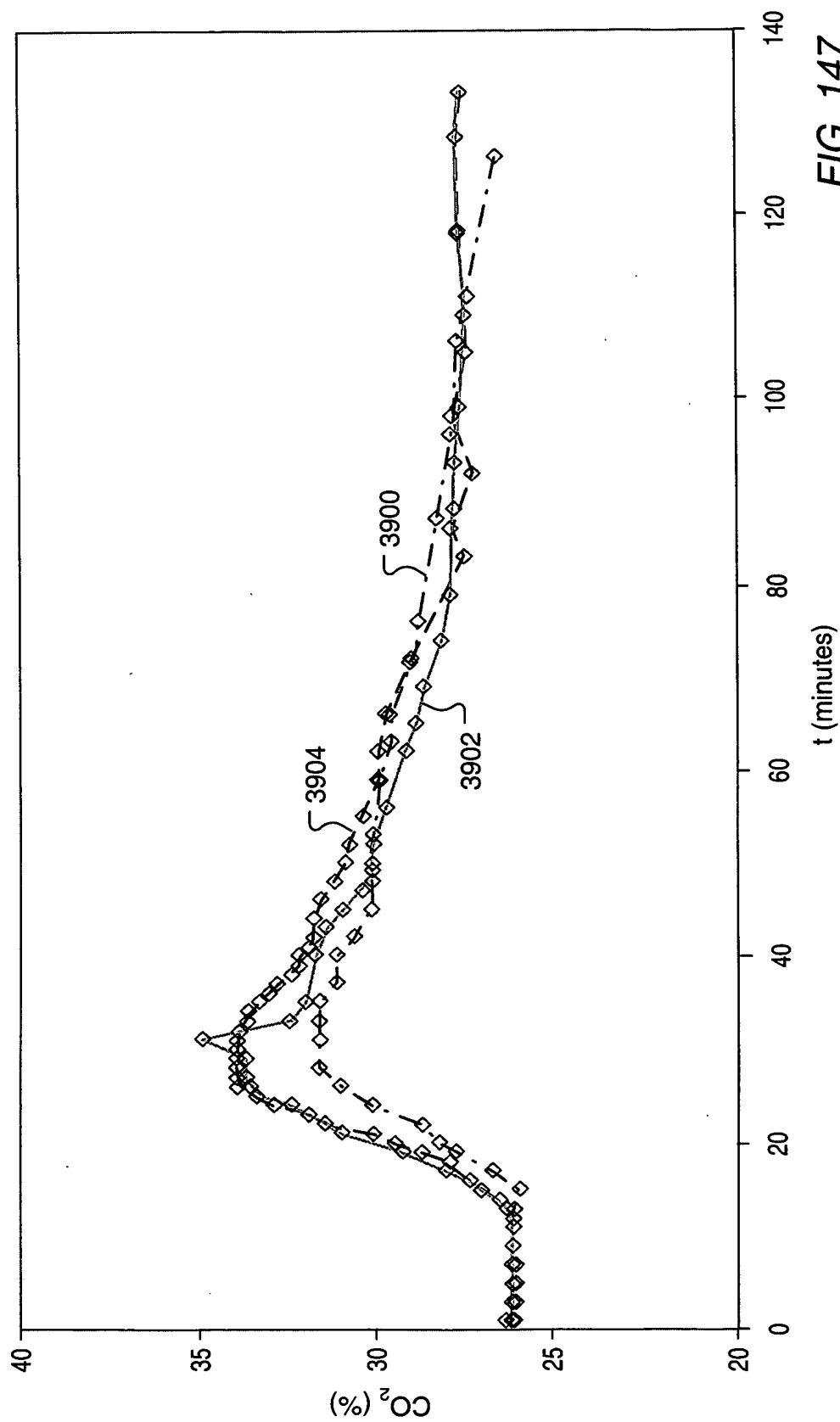


FIG. 147

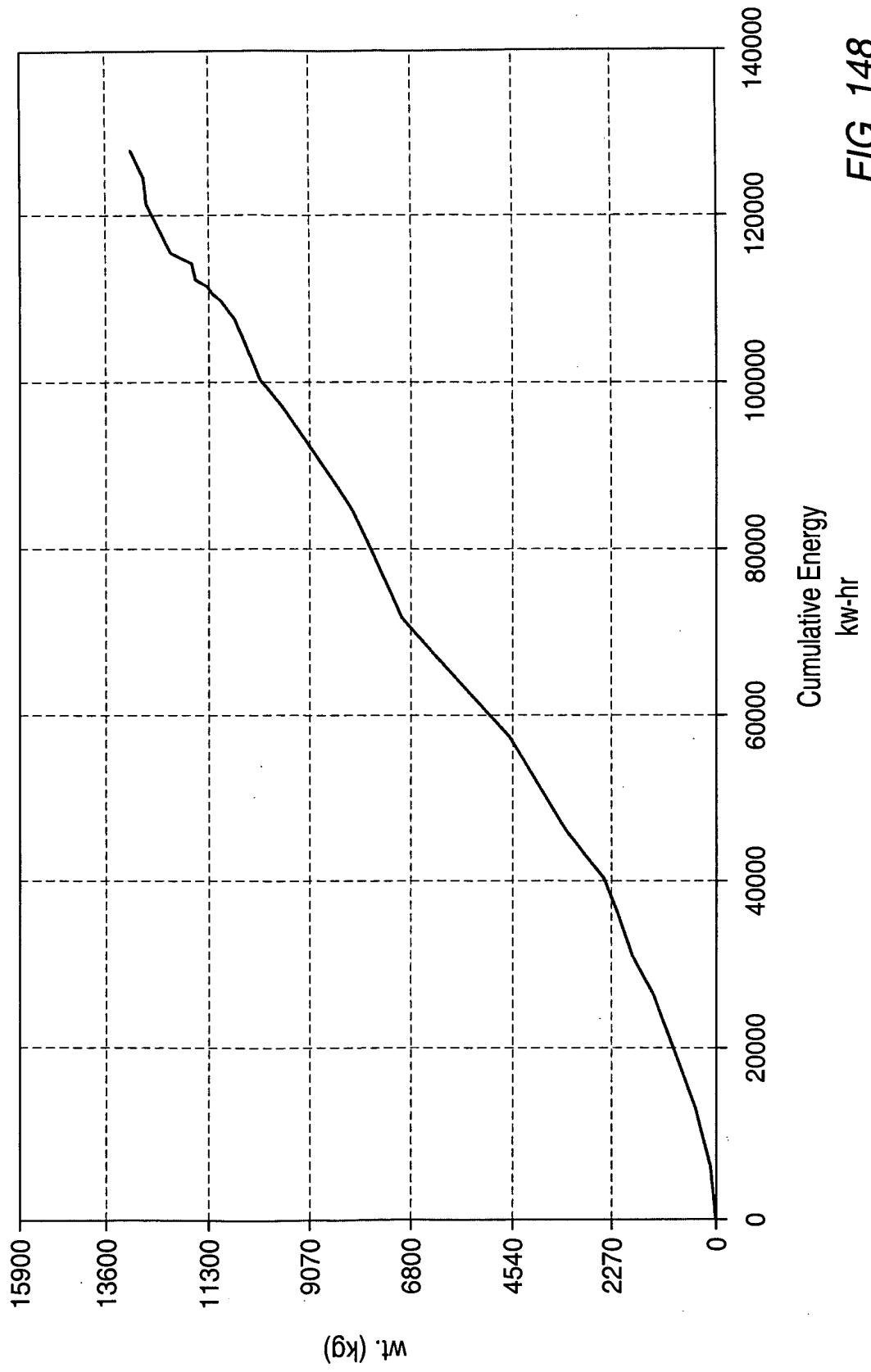


FIG. 148

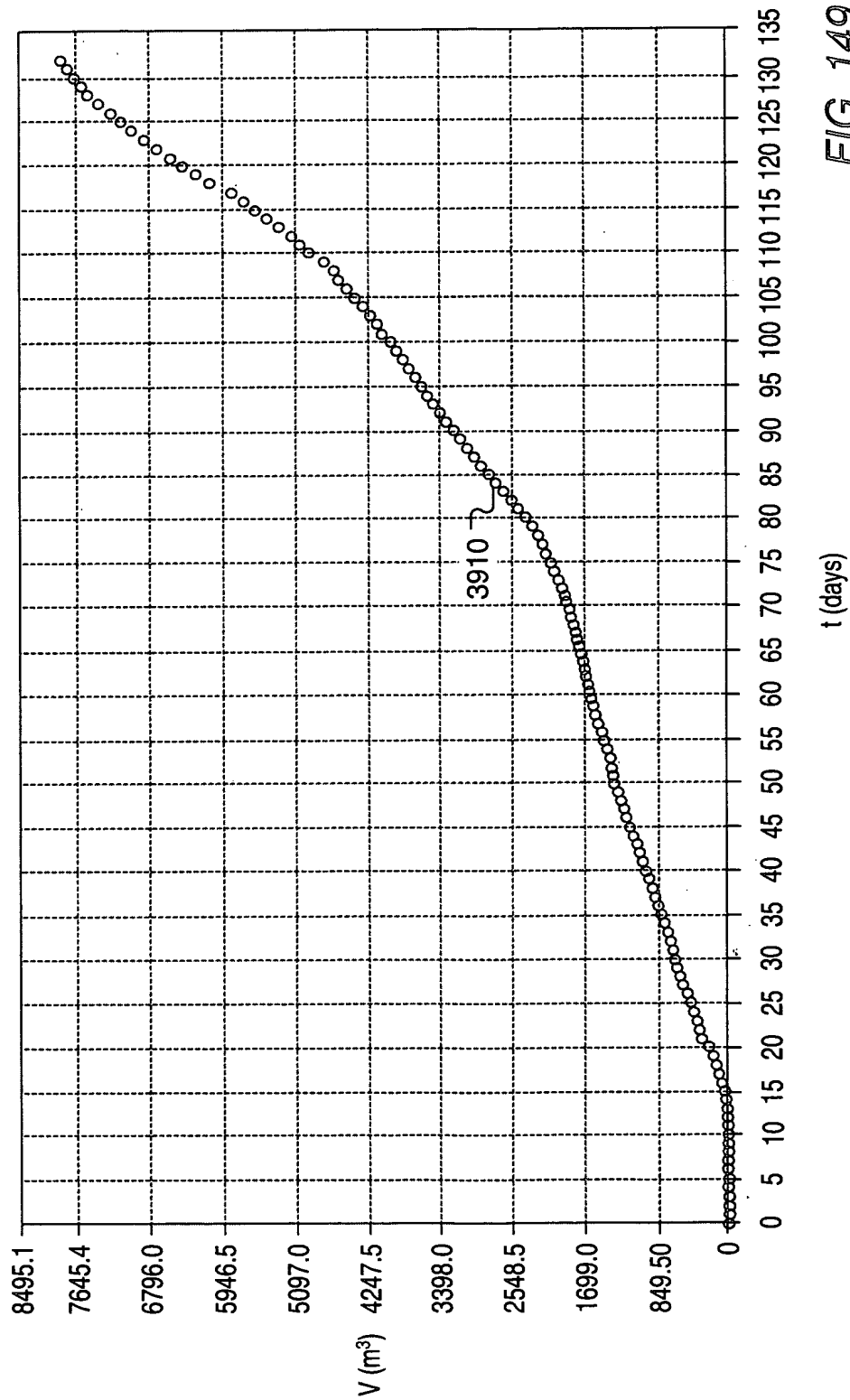


FIG. 149

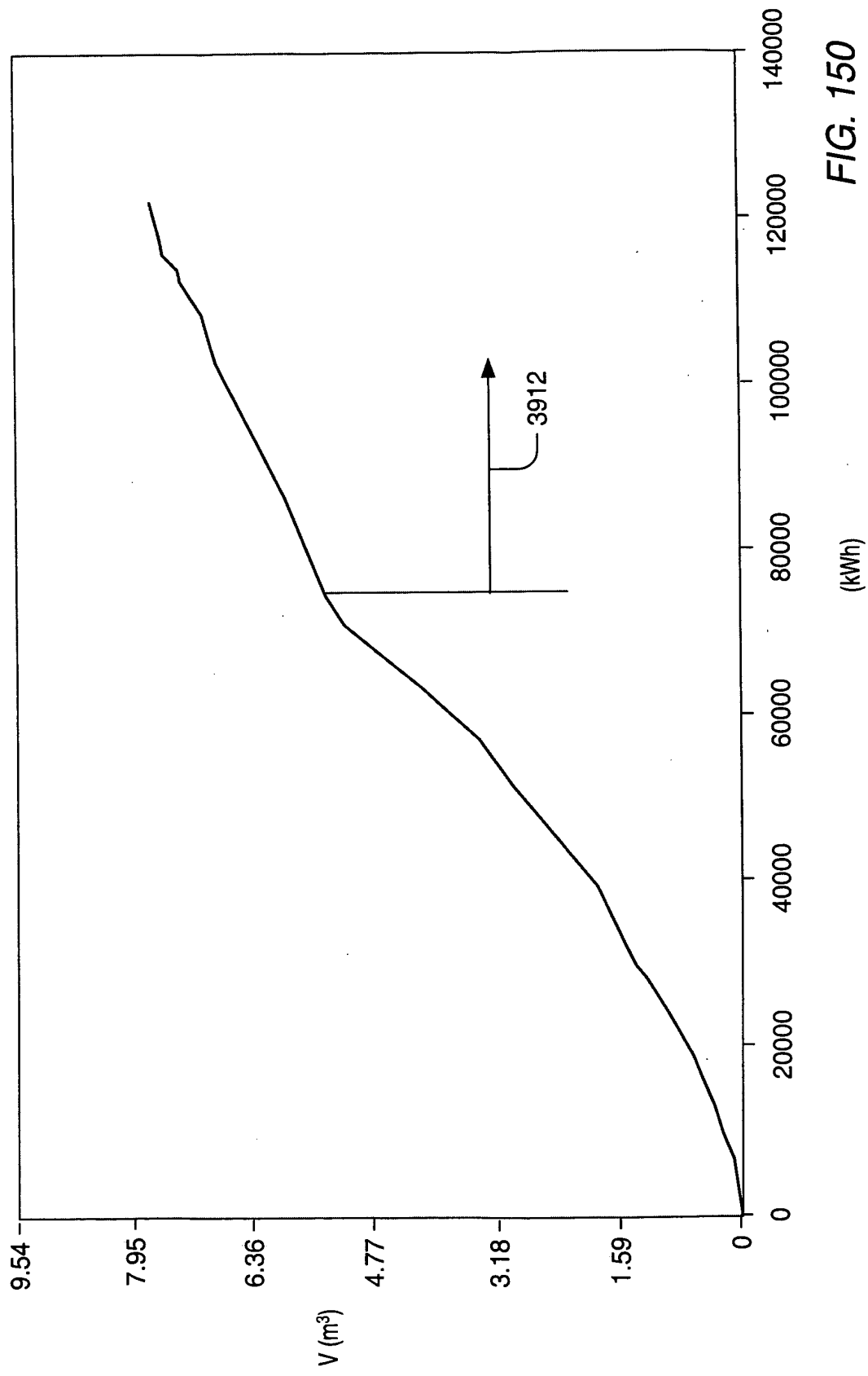


FIG. 150

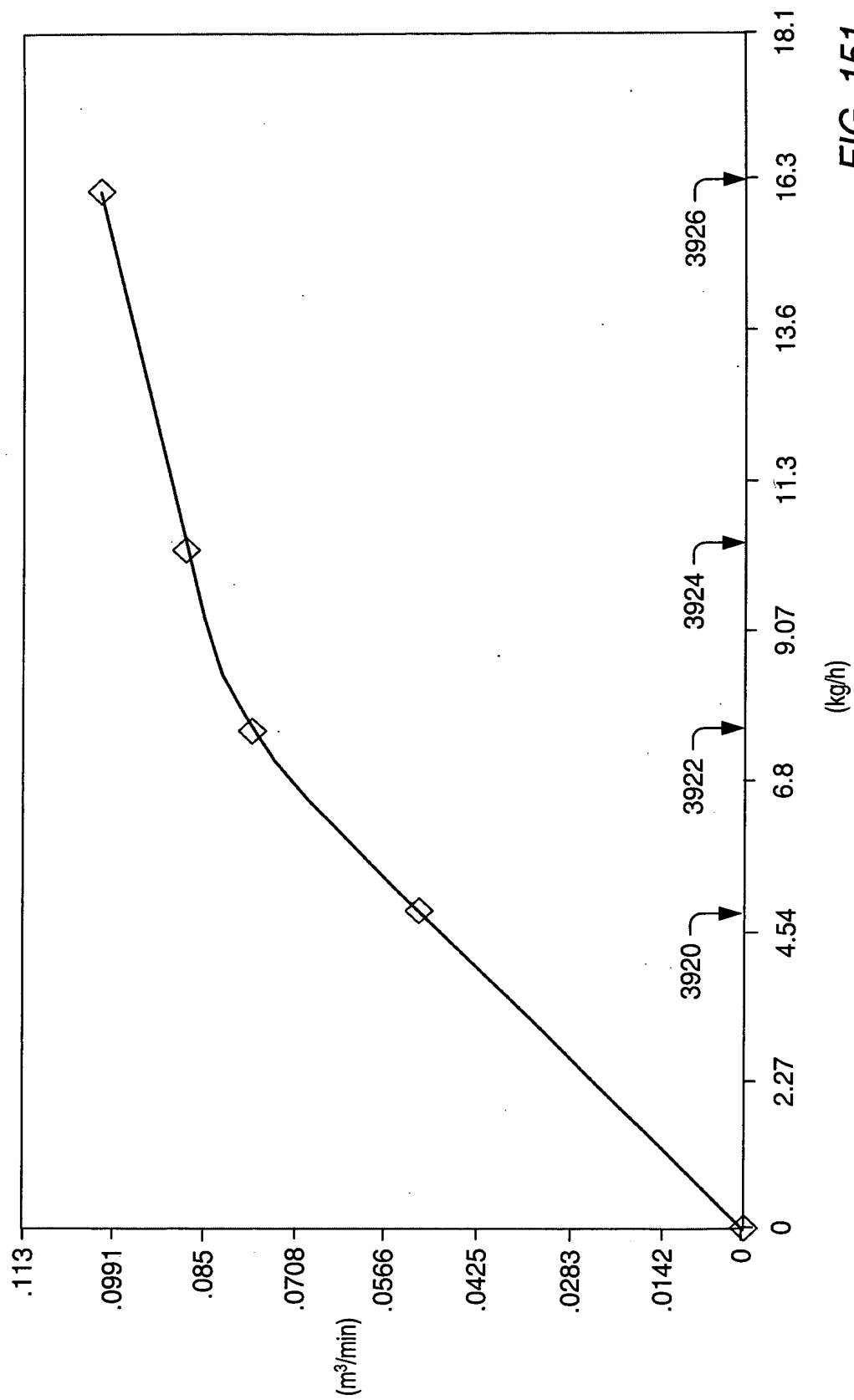


FIG. 151

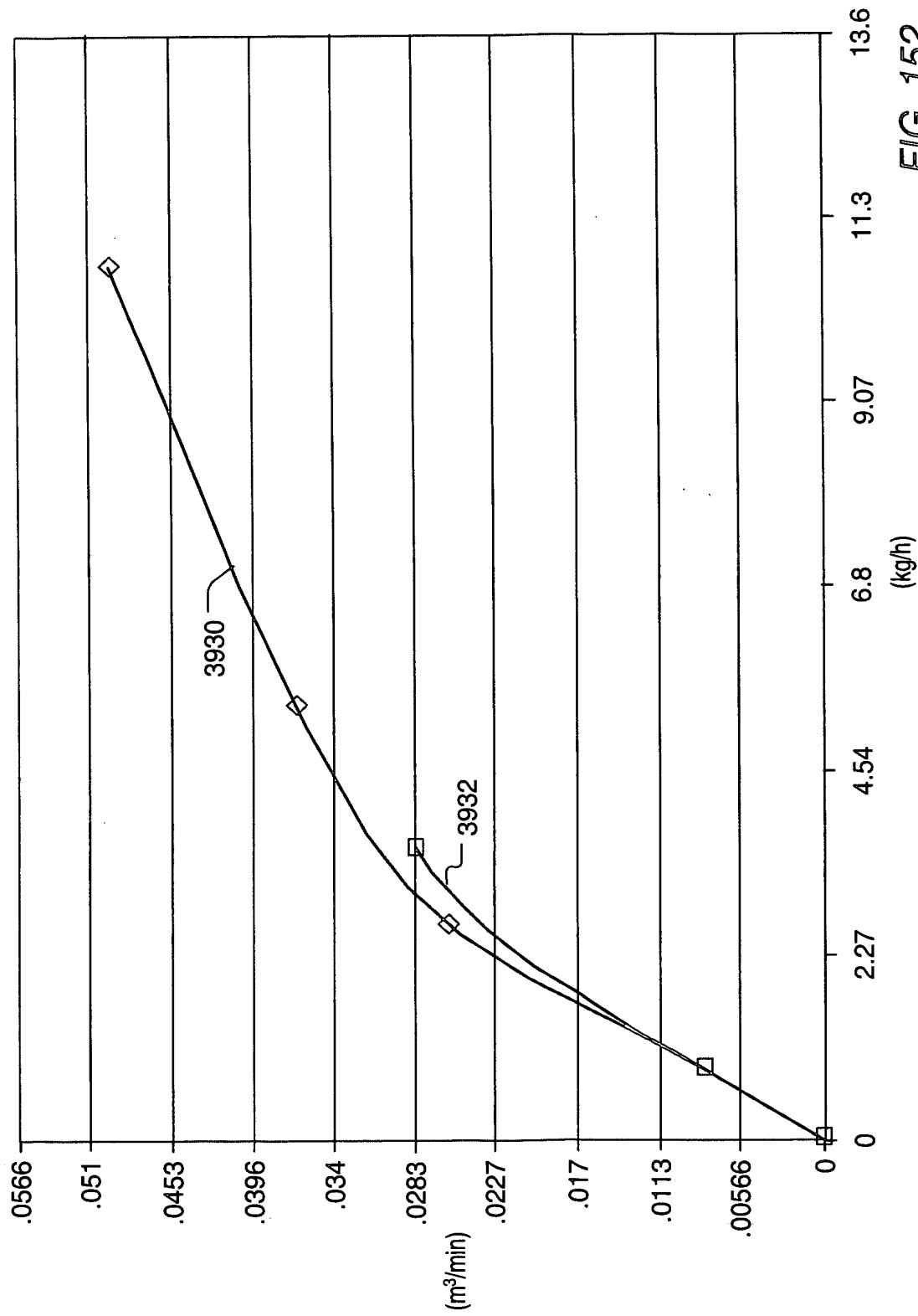


FIG. 152

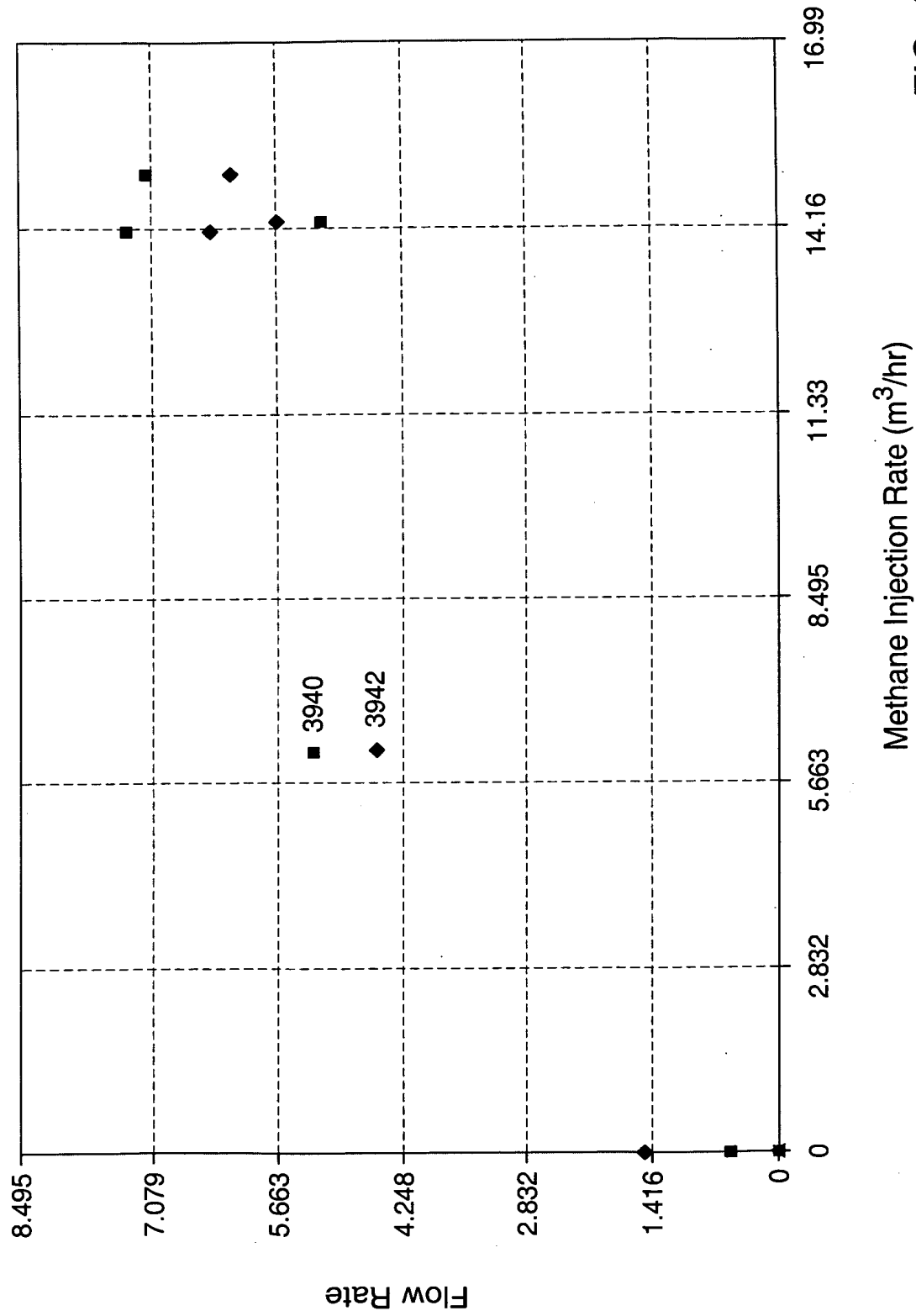


FIG. 153

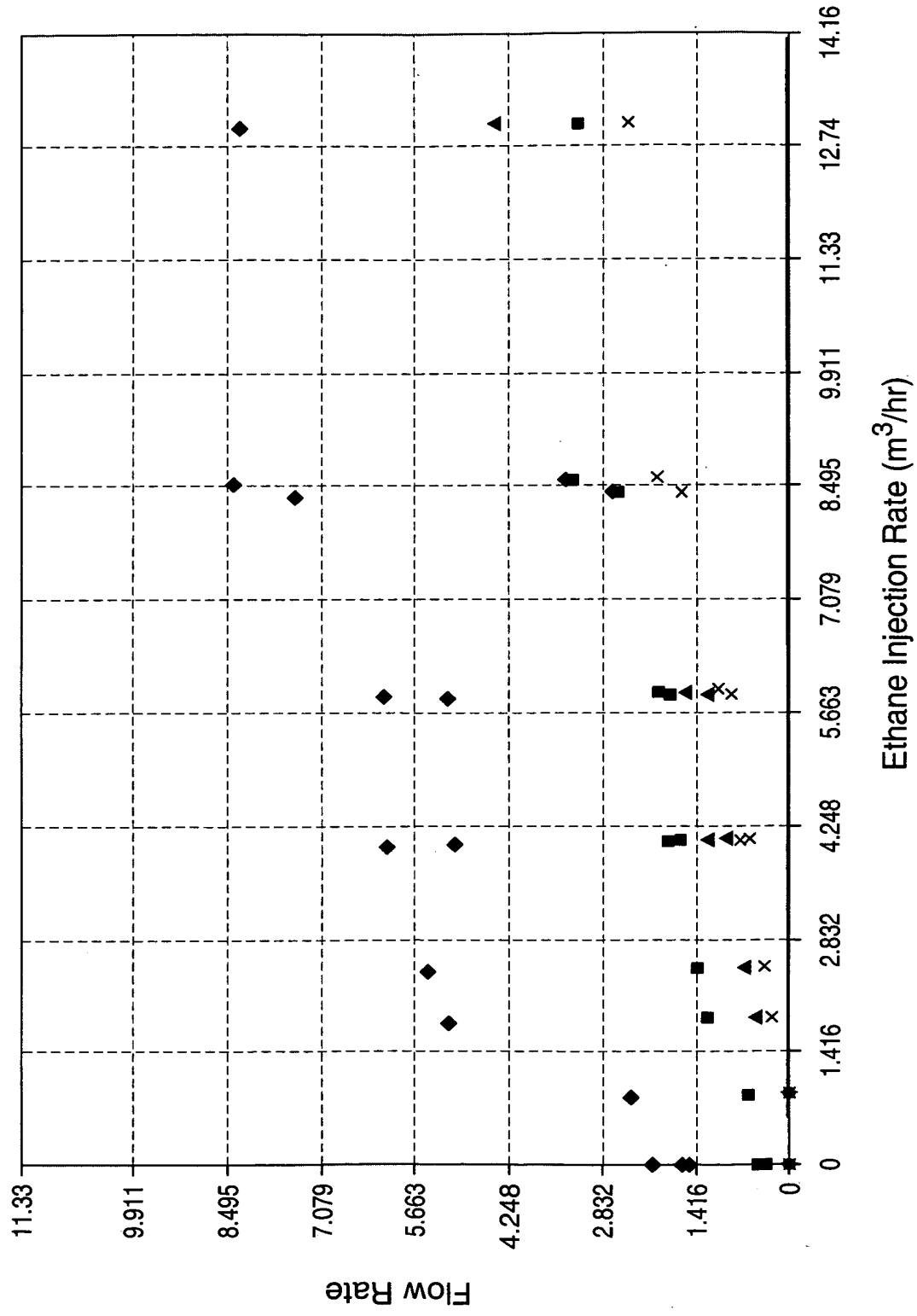


FIG. 154

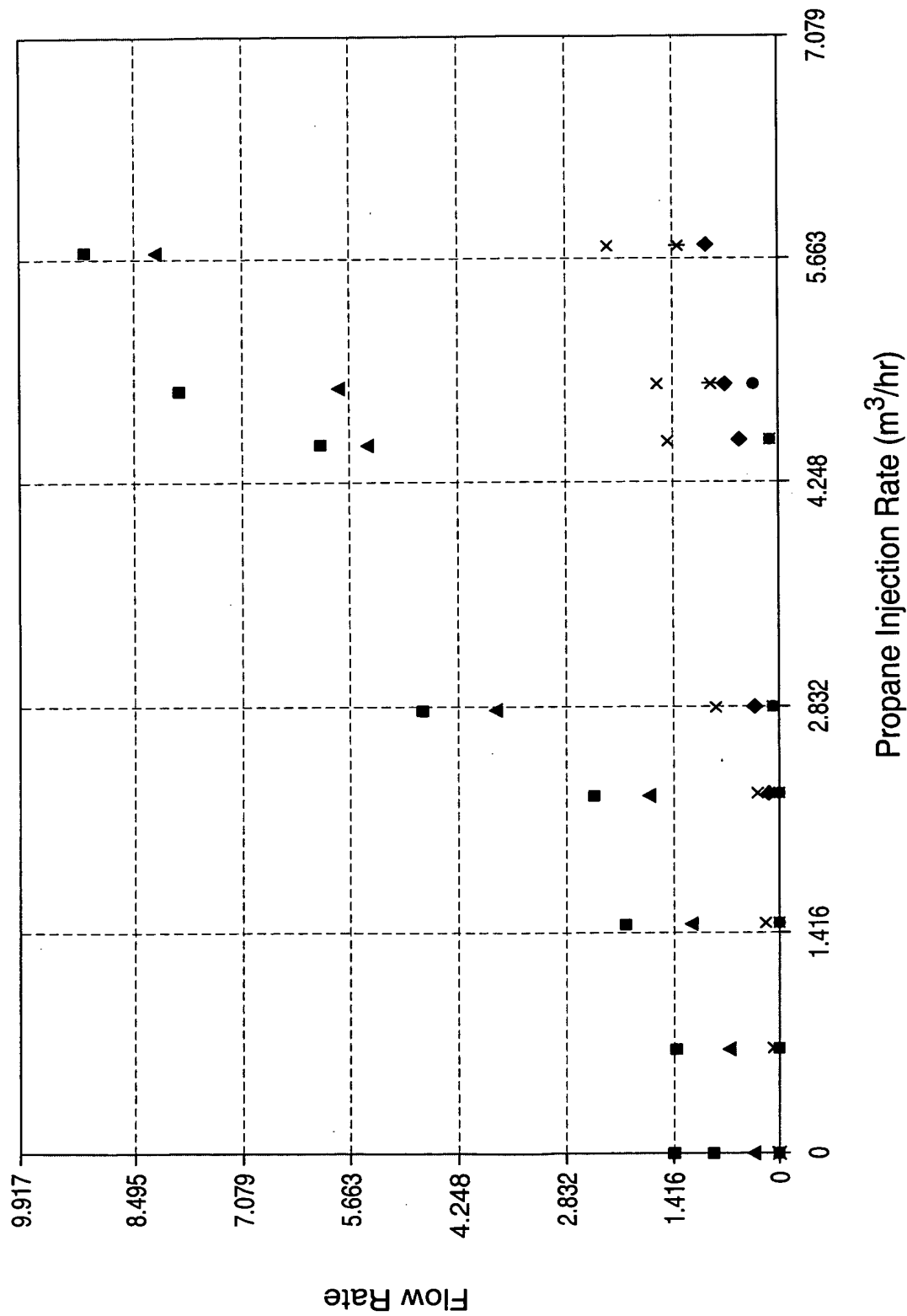


FIG. 155

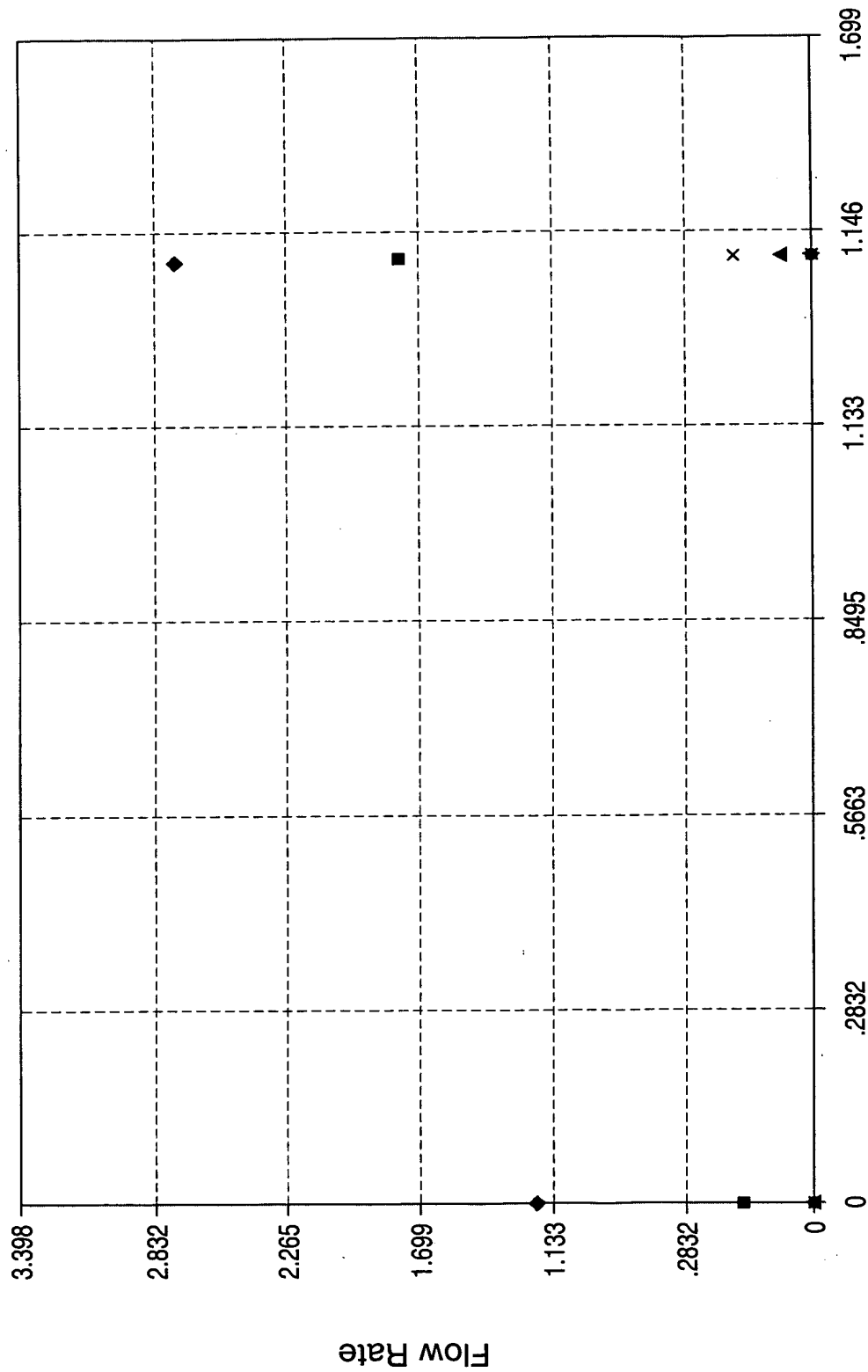


FIG. 156

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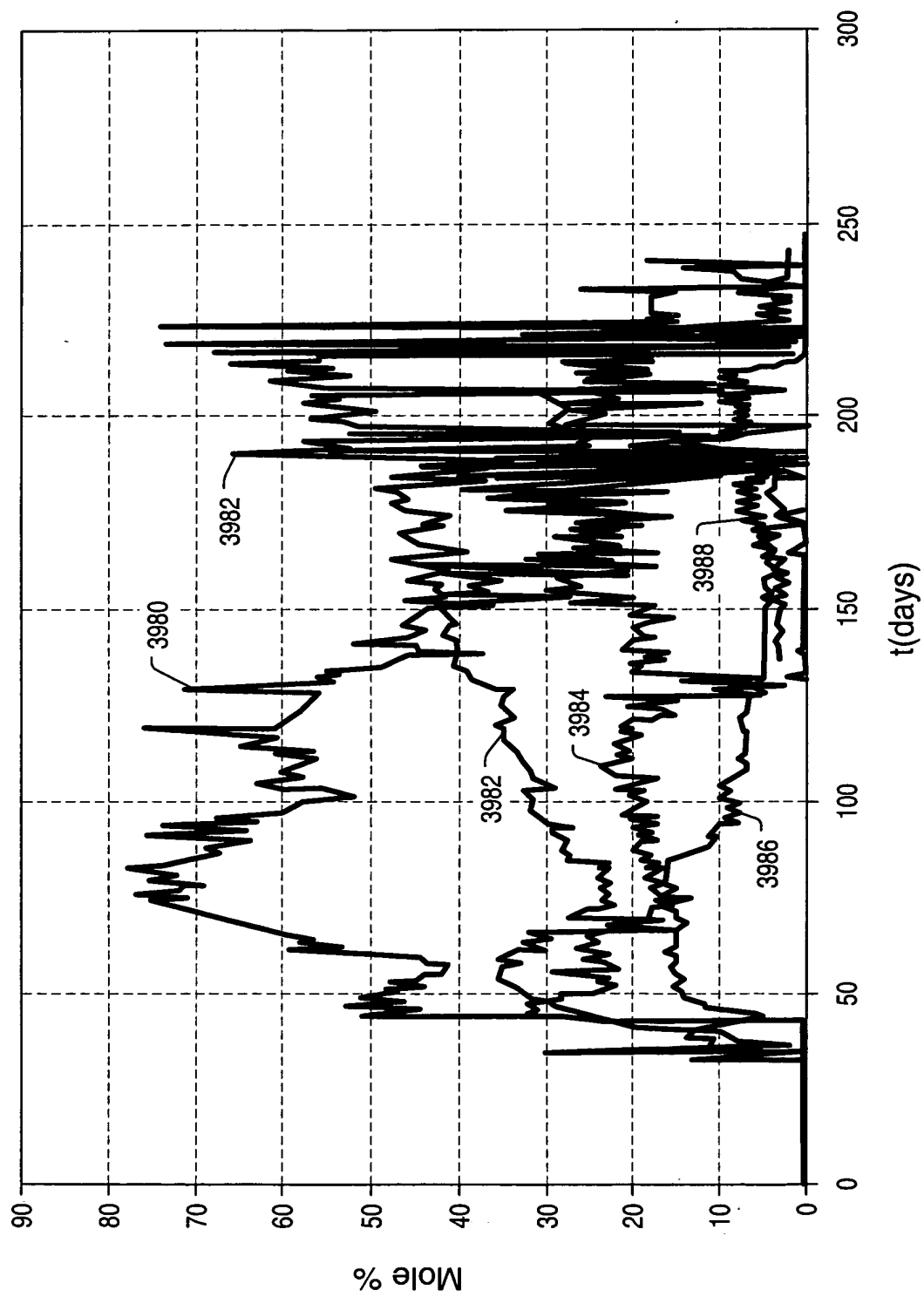


FIG. 157

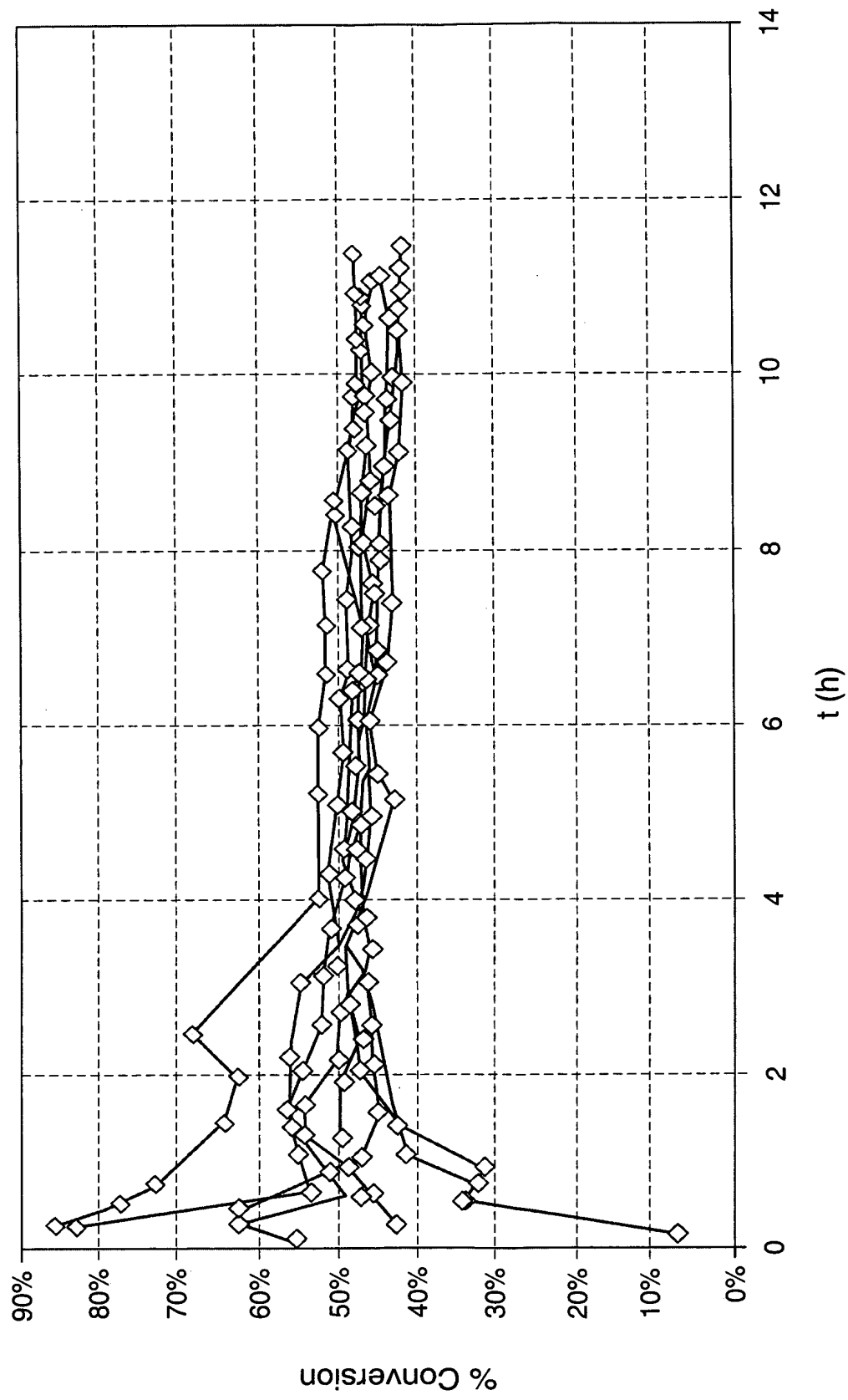


FIG. 158

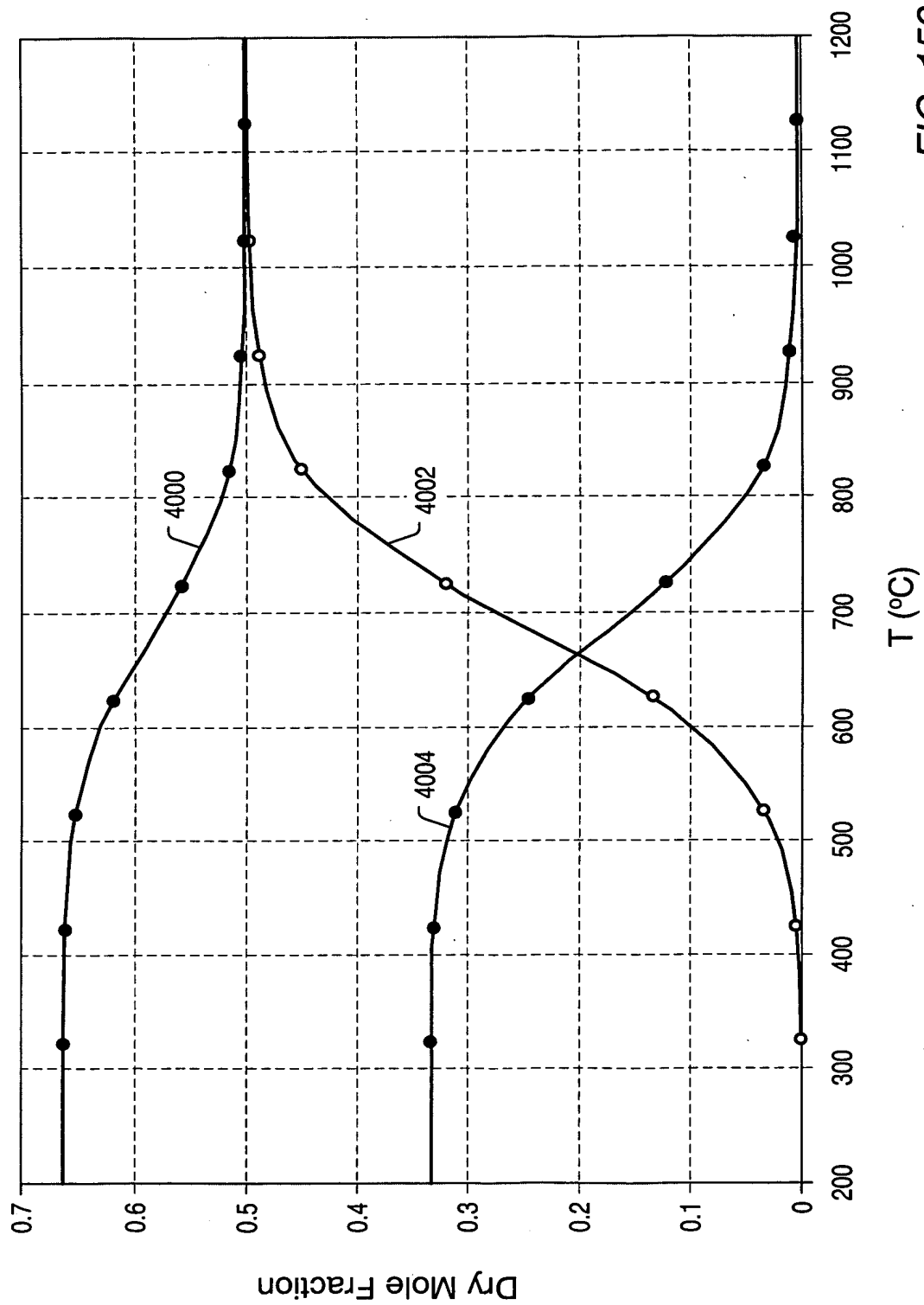


FIG. 159

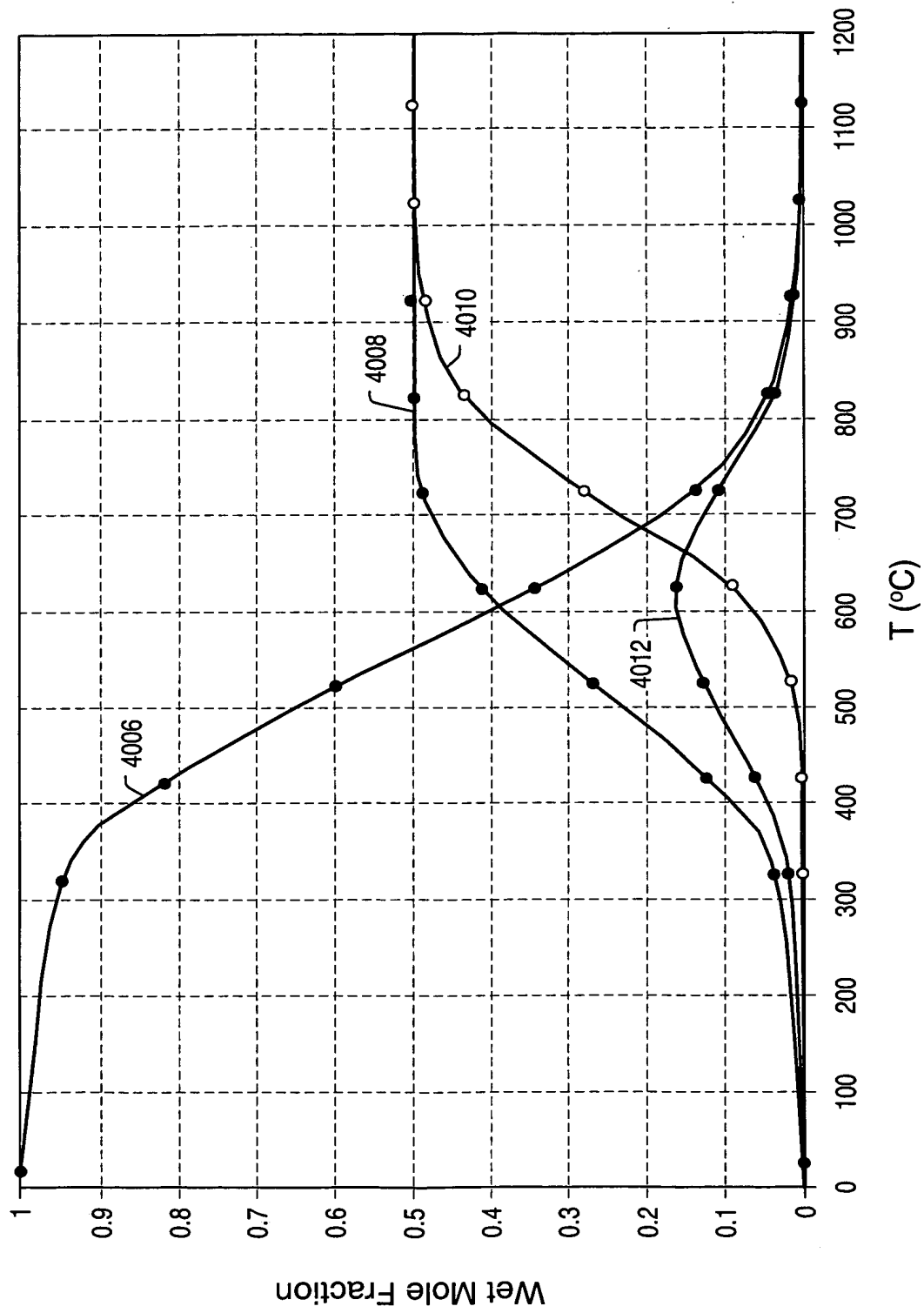
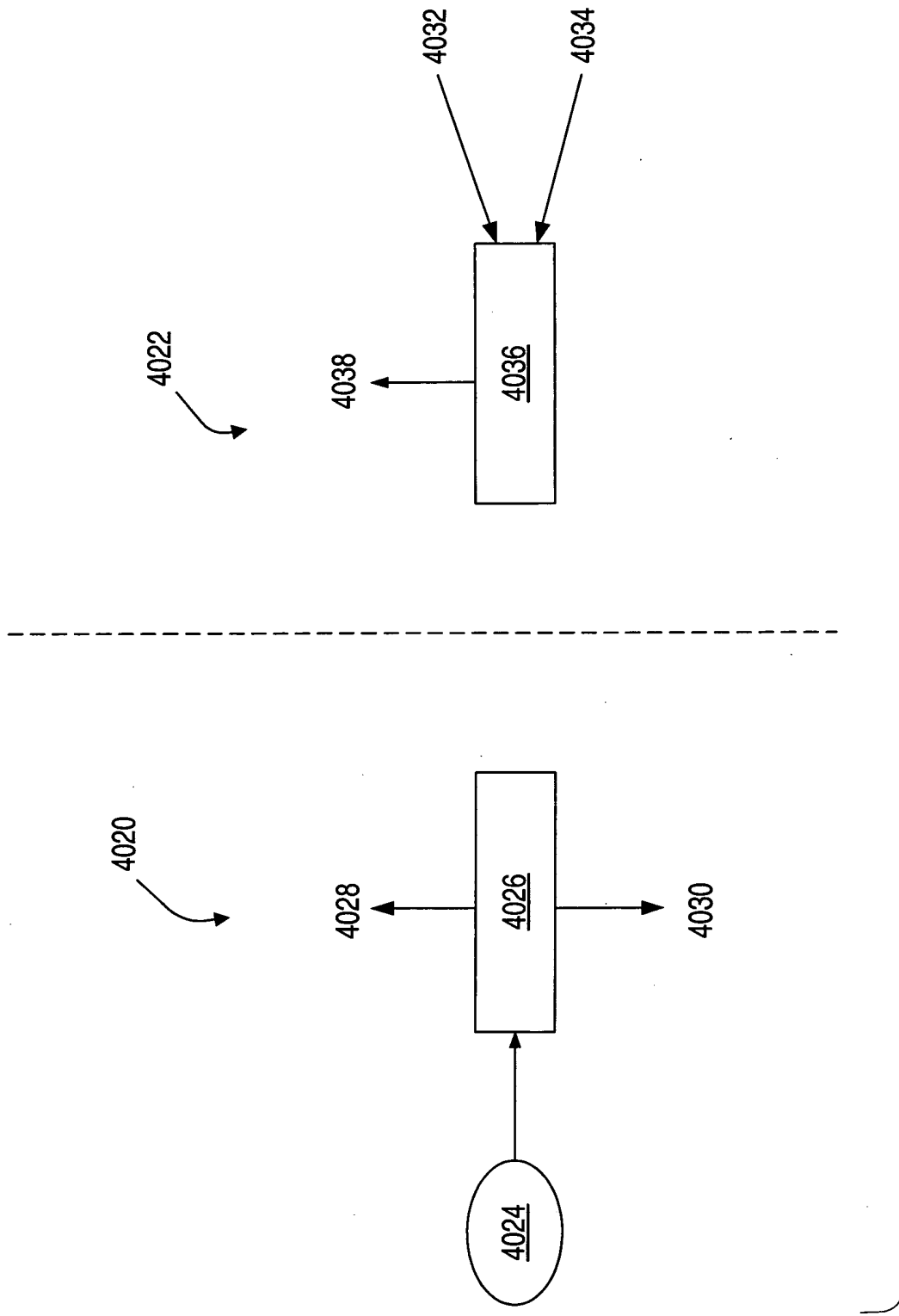


FIG. 160



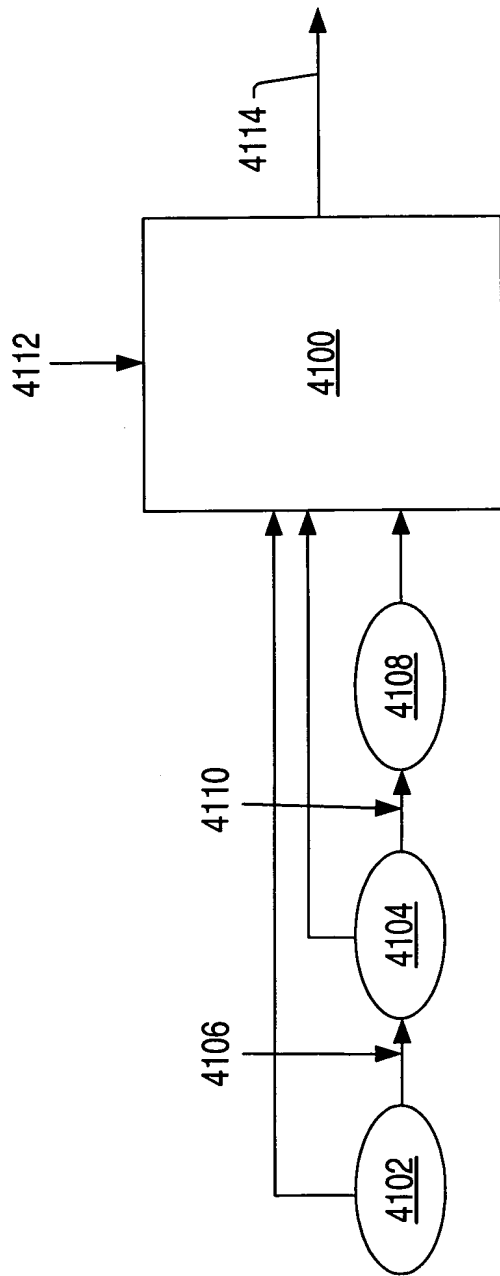


FIG. 162

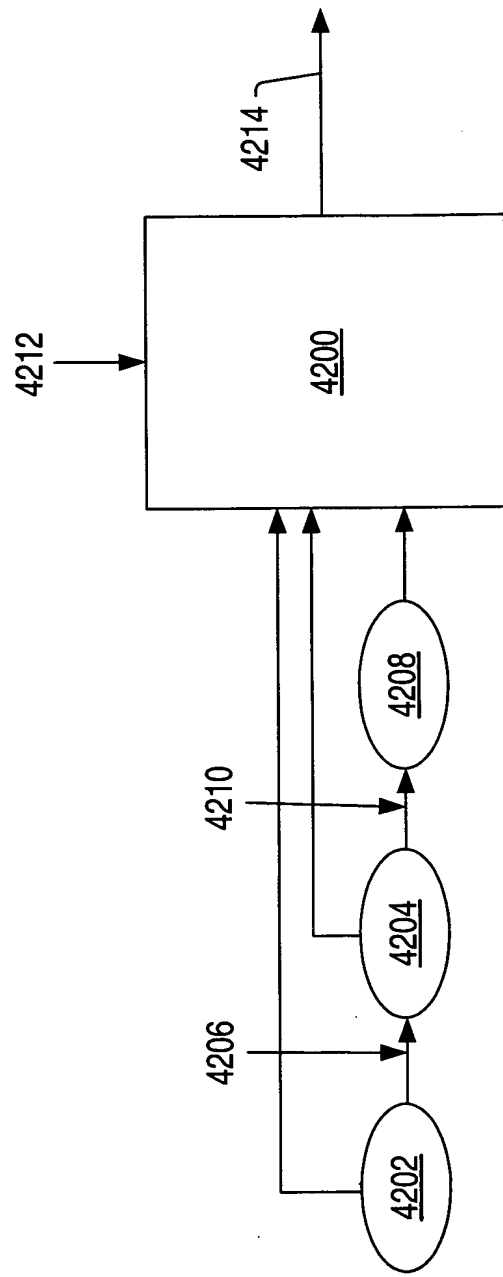


FIG. 163

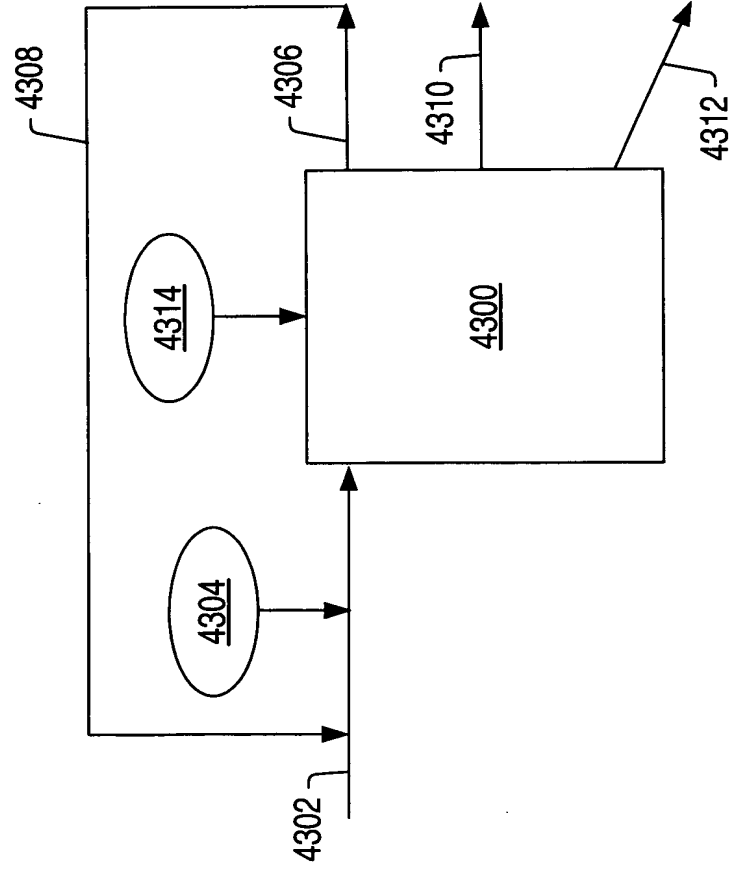
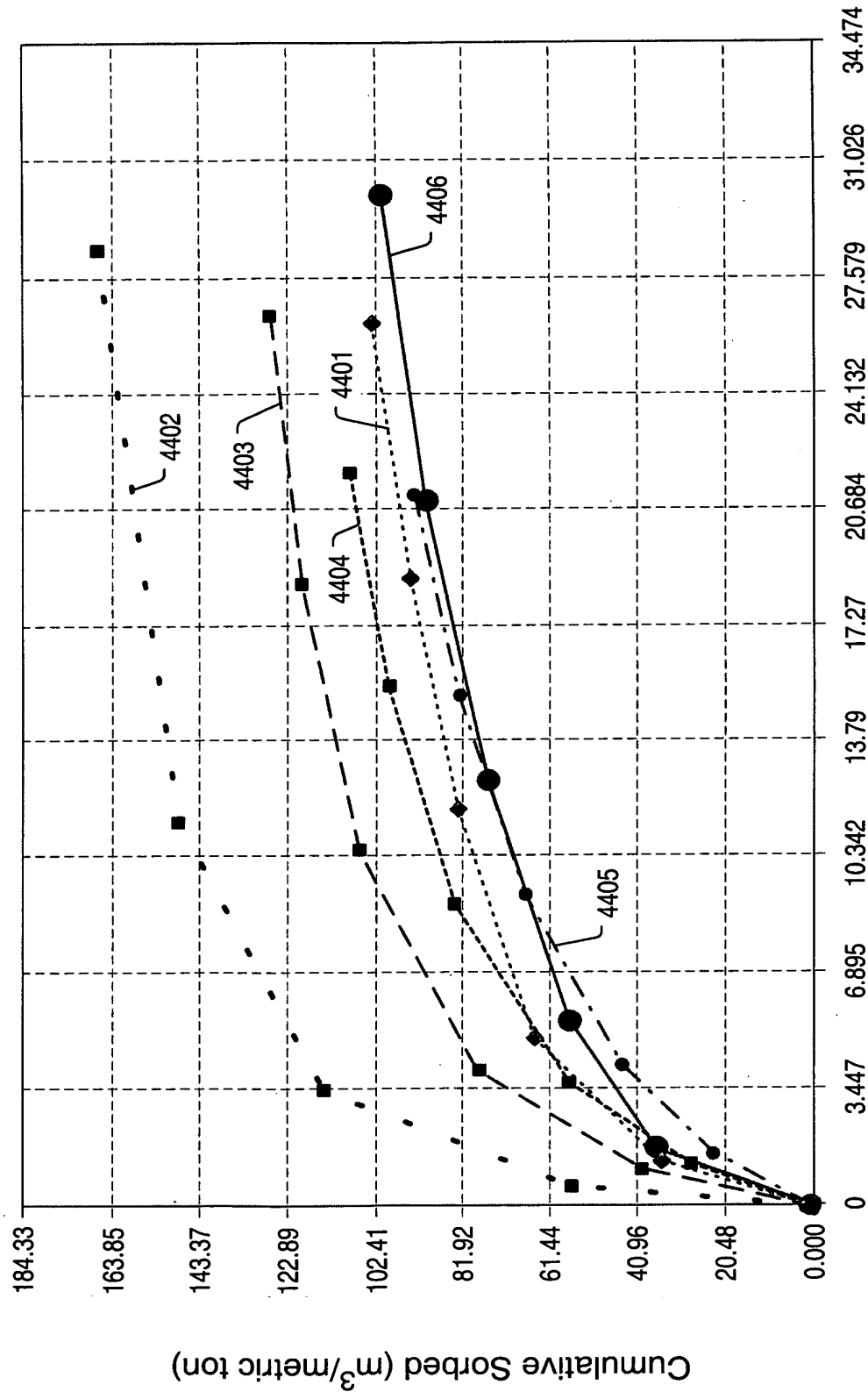


FIG. 164



Pressure (bars absolute)

FIG. 165

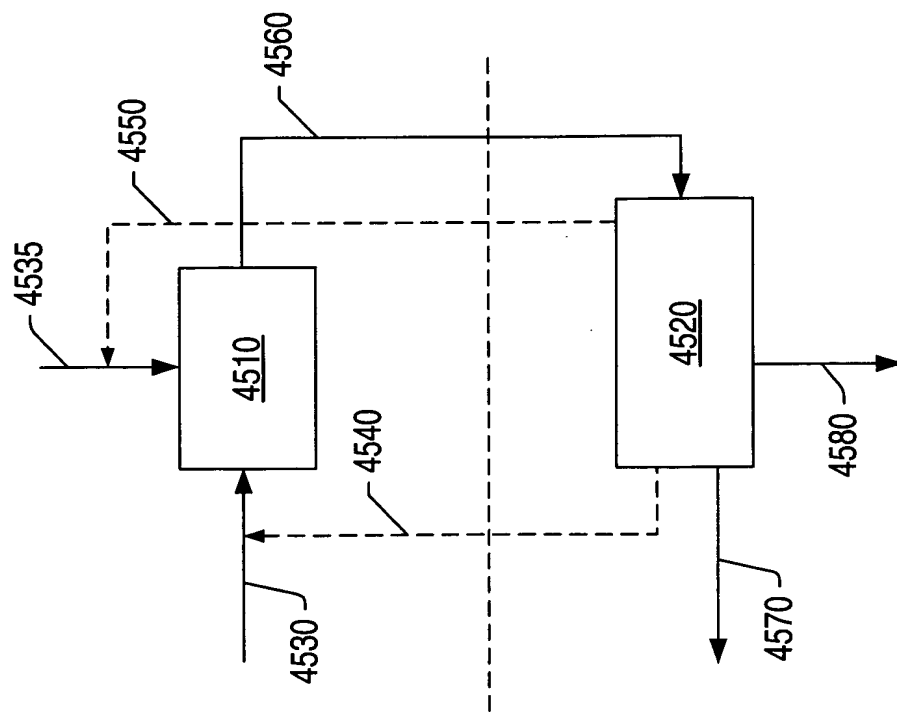


FIG. 166

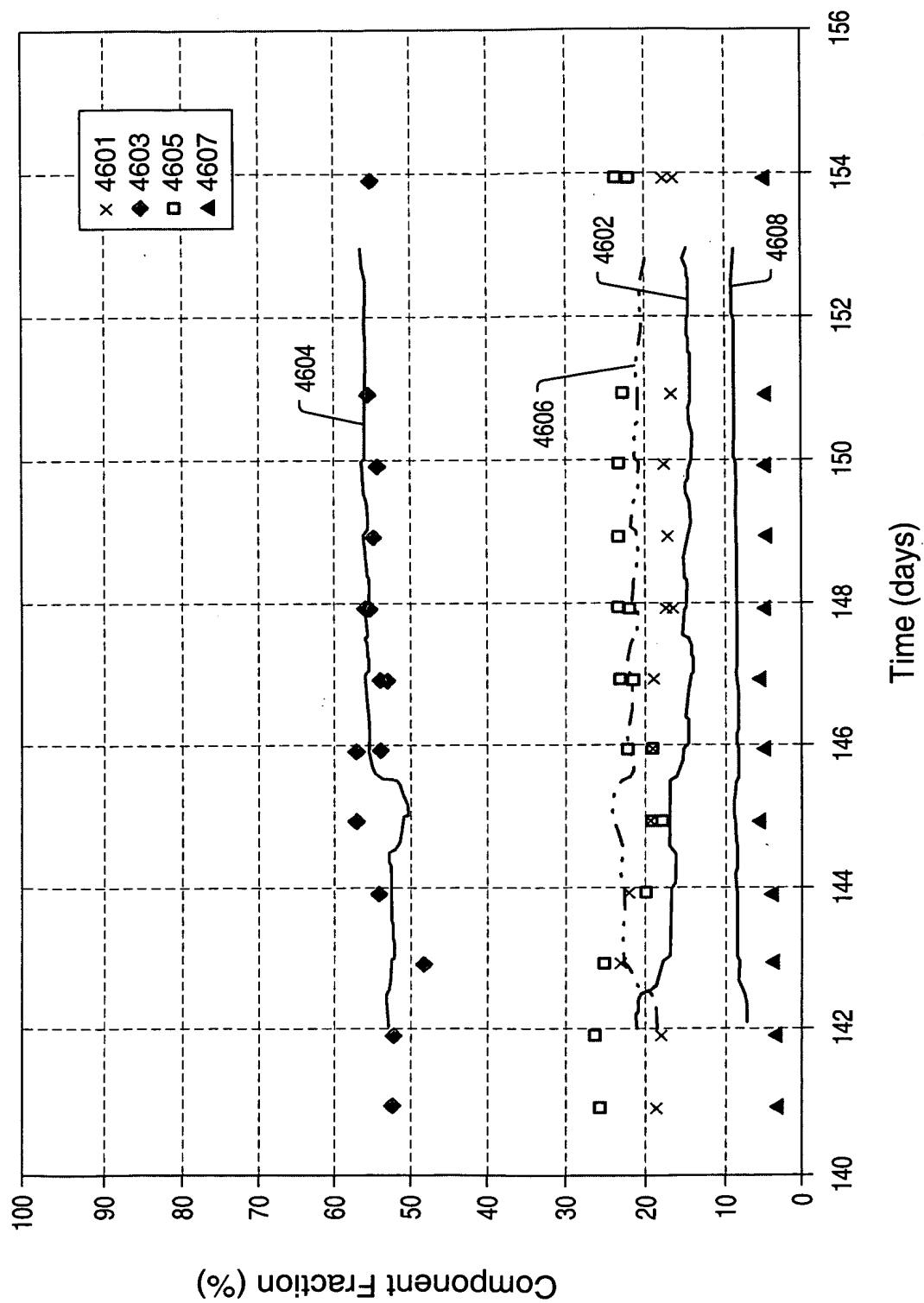


FIG. 167

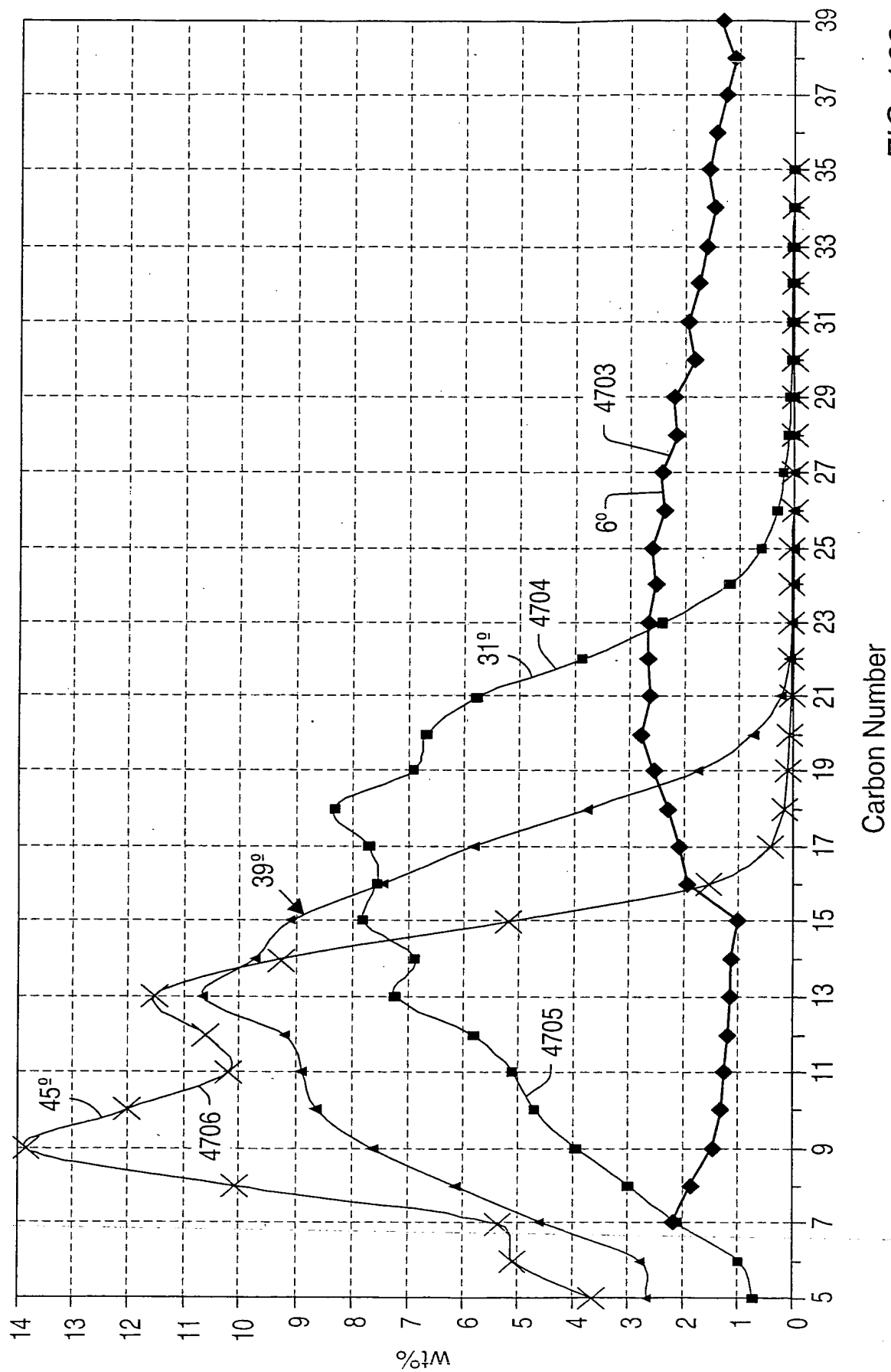


FIG. 168

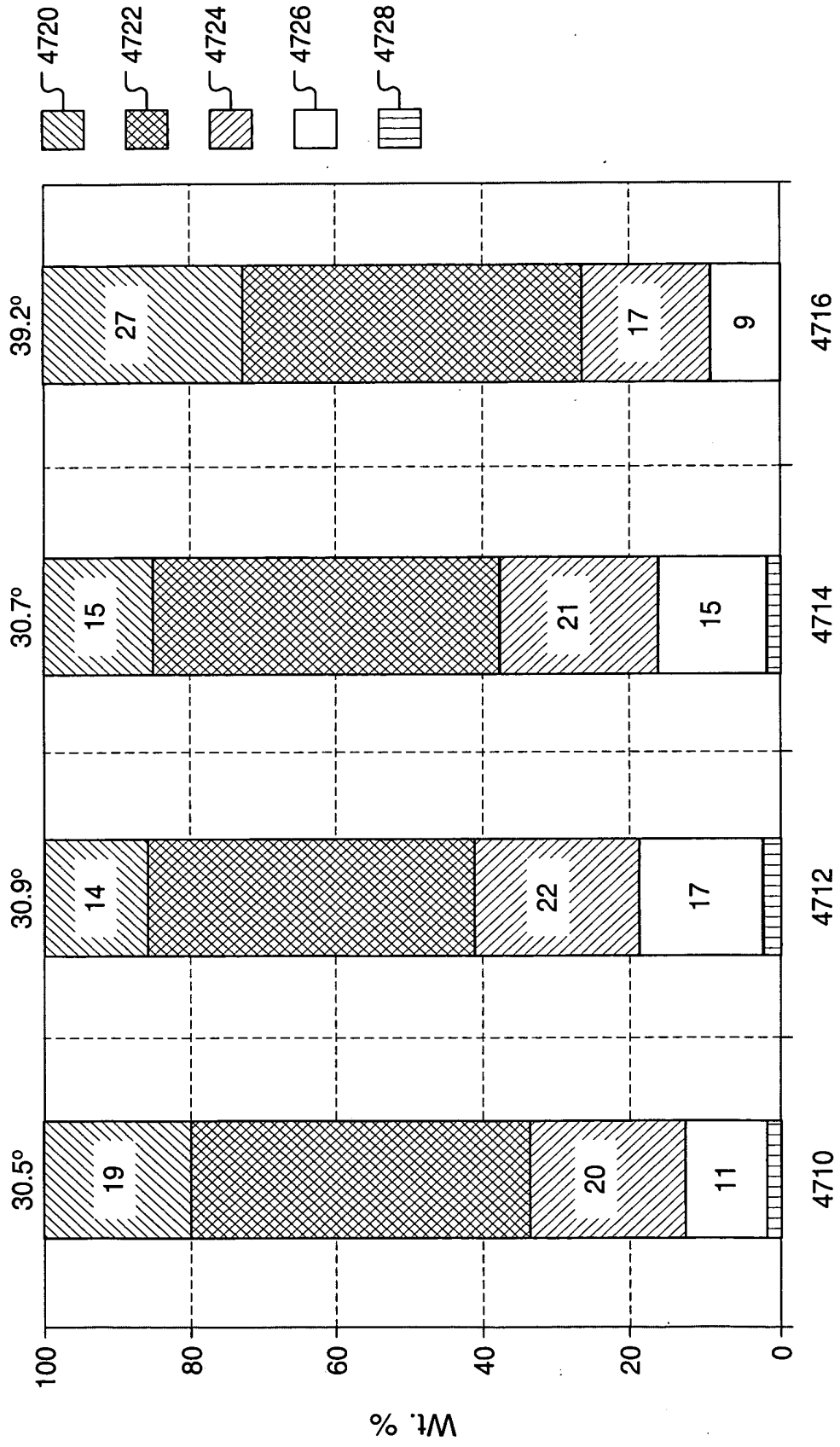


FIG. 169

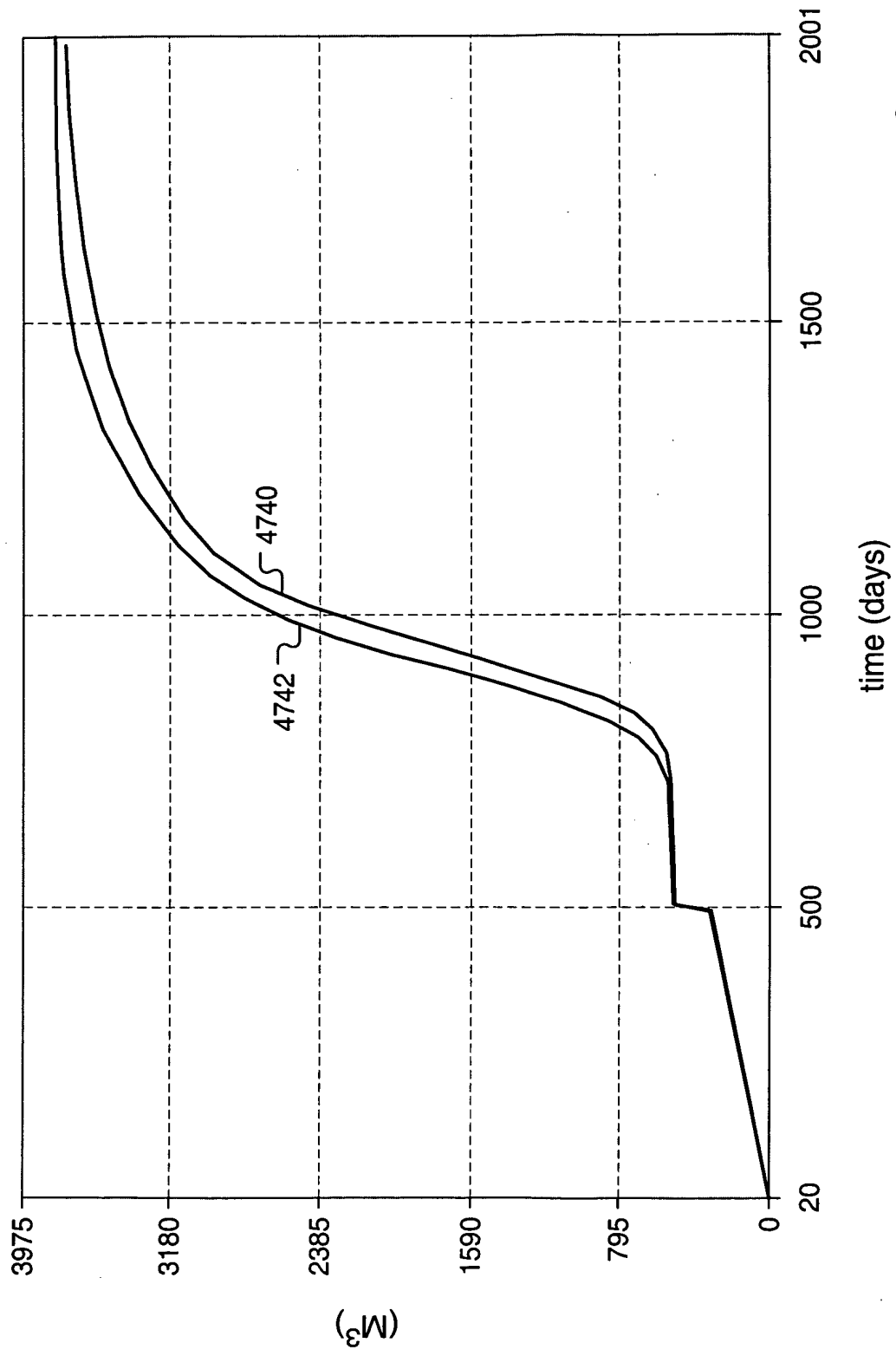


FIG. 170

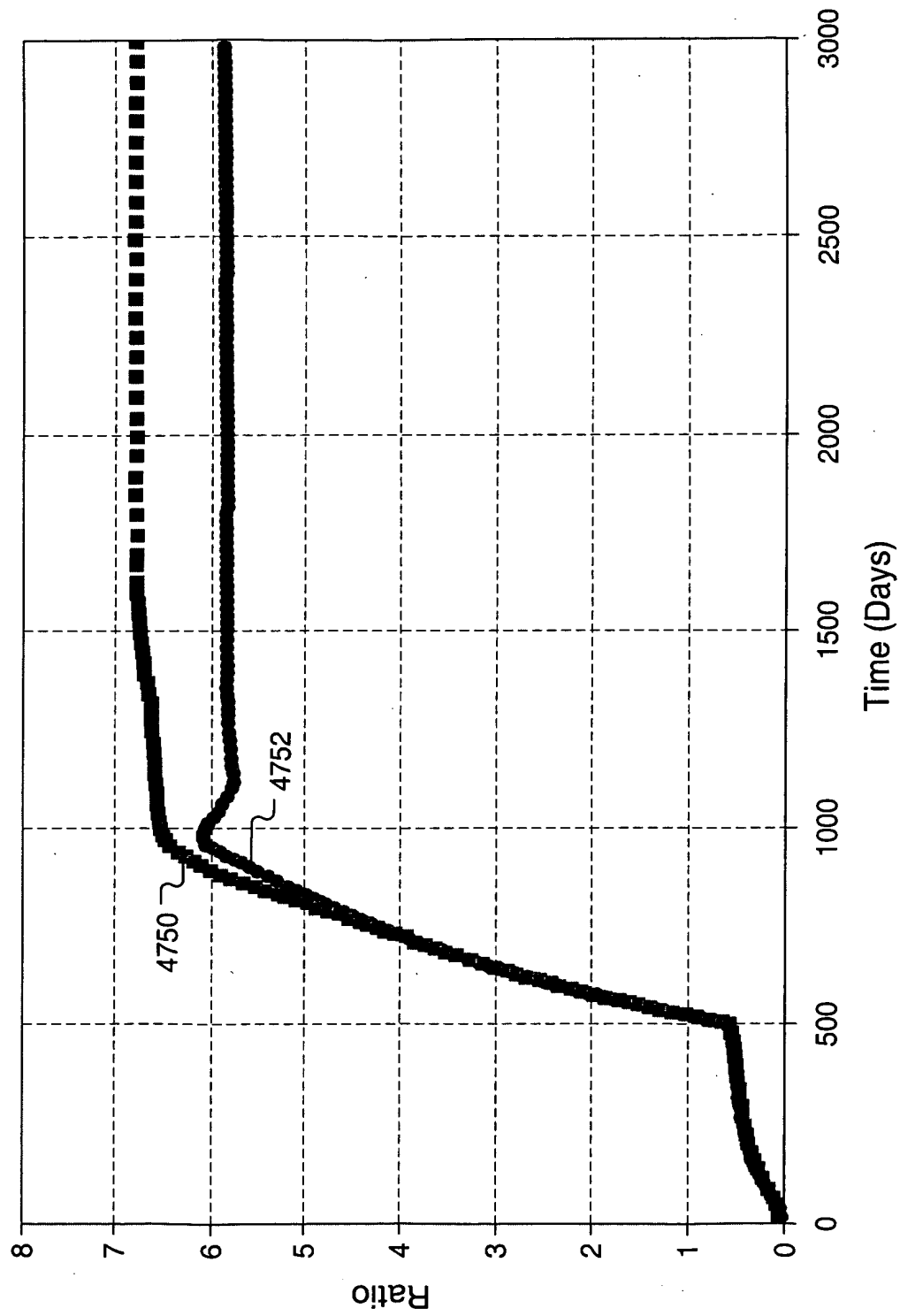


FIG. 171

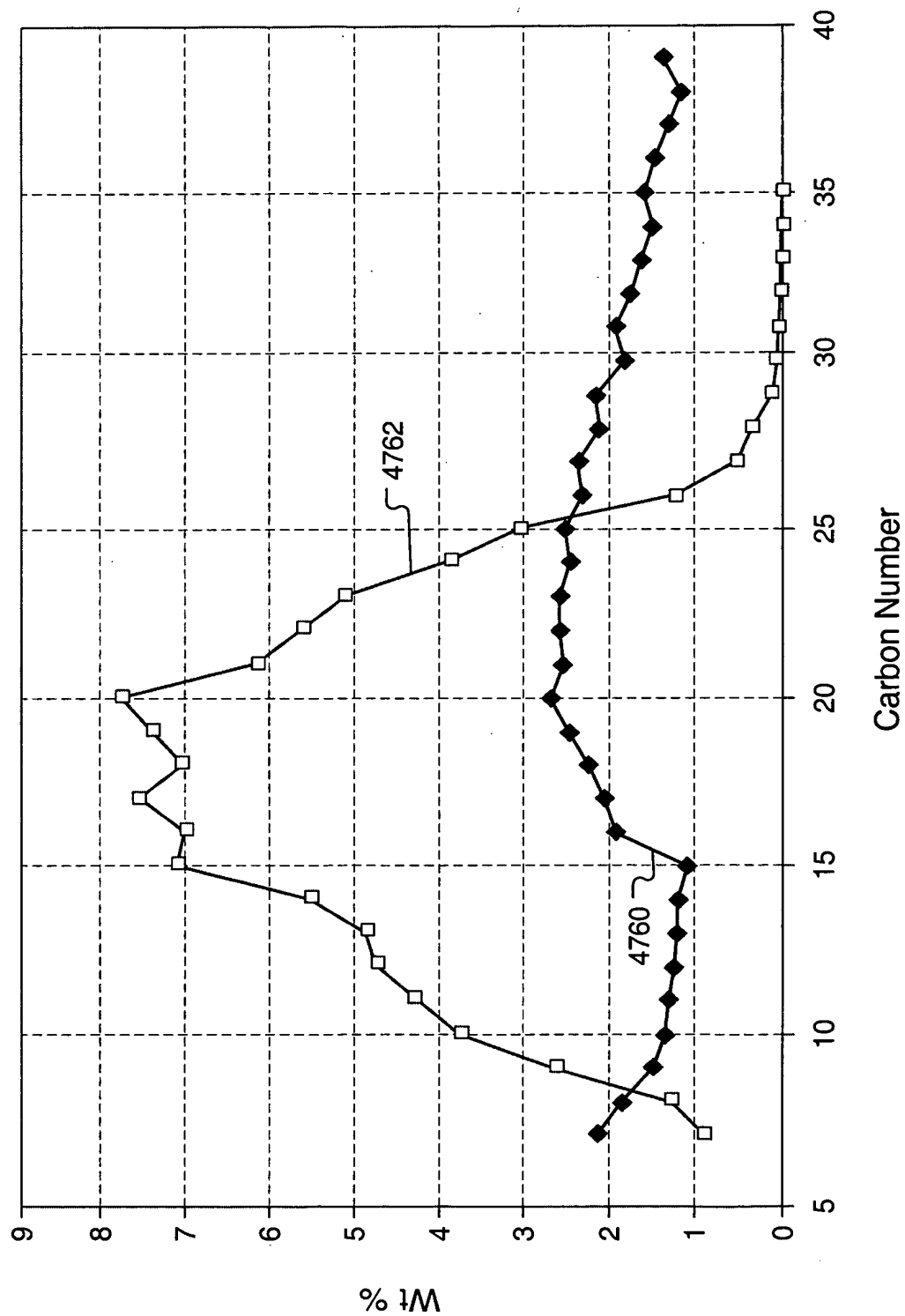


FIG. 172

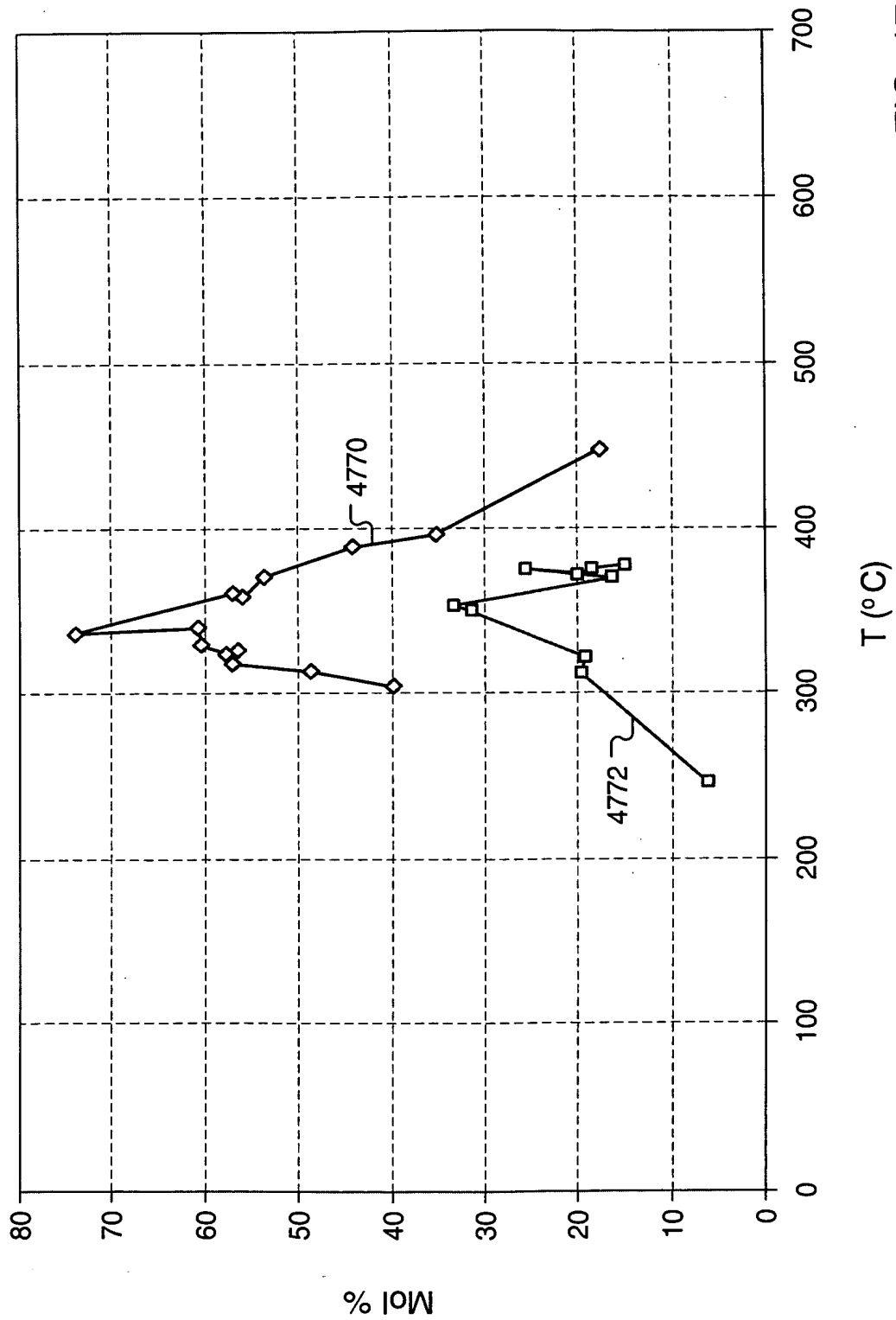


FIG. 173

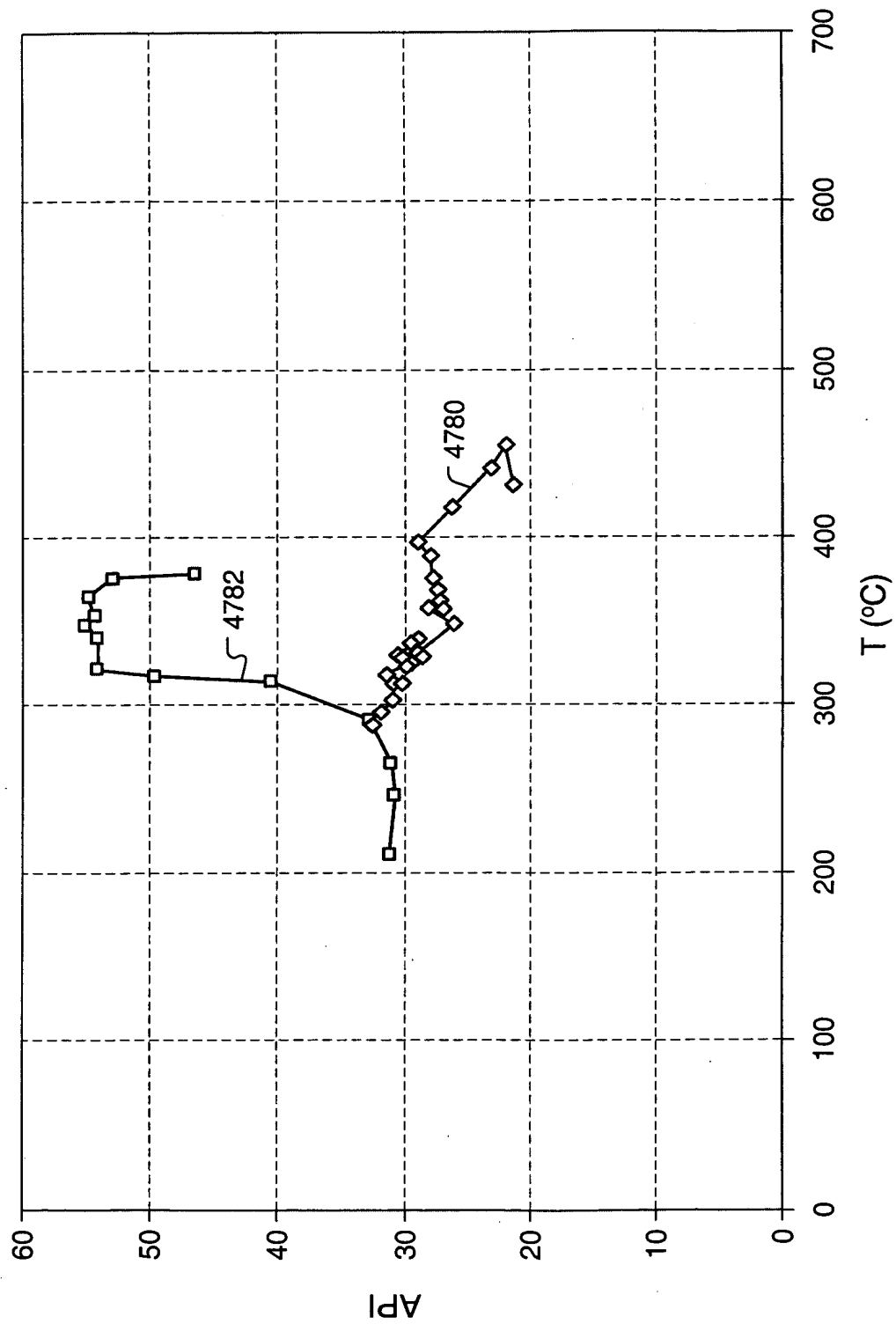
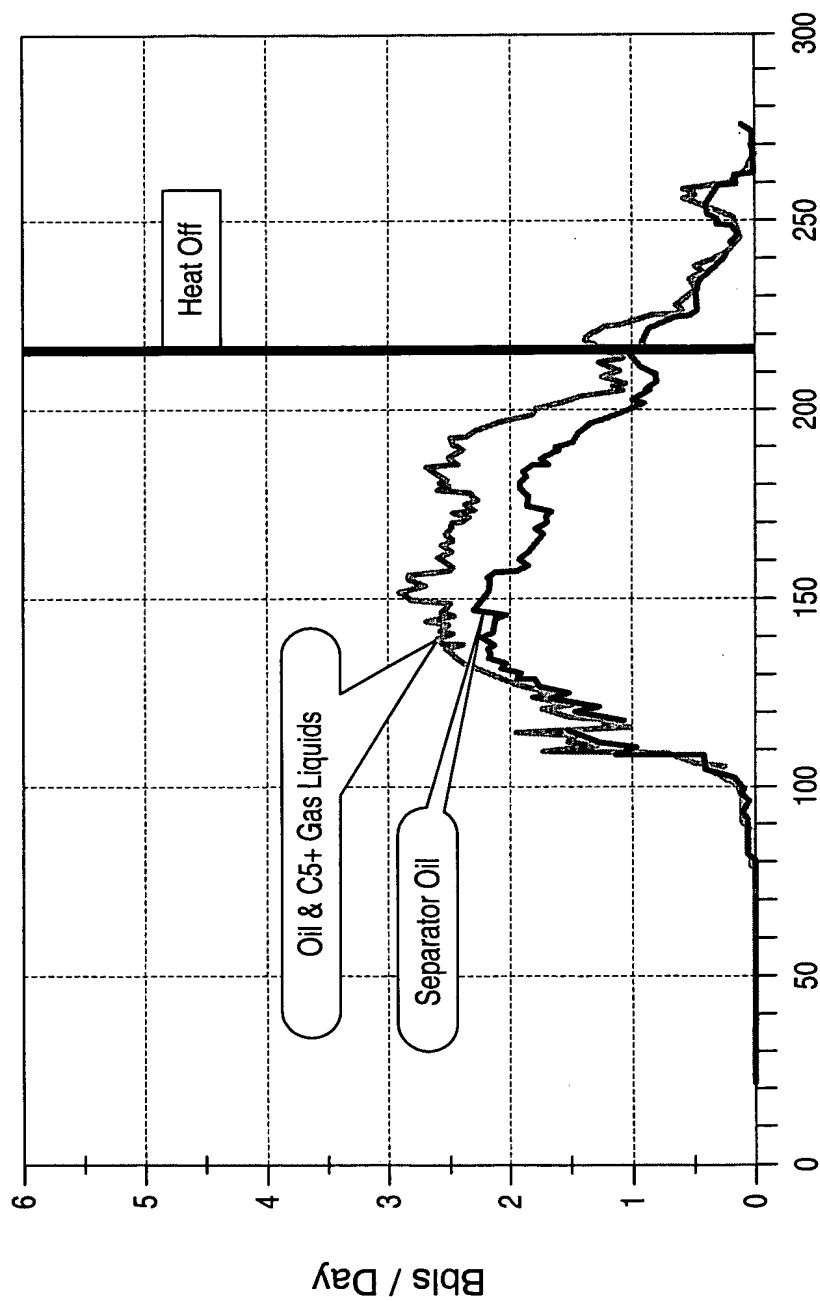


FIG. 174



Days From Start of Heat Injection

FIG. 175

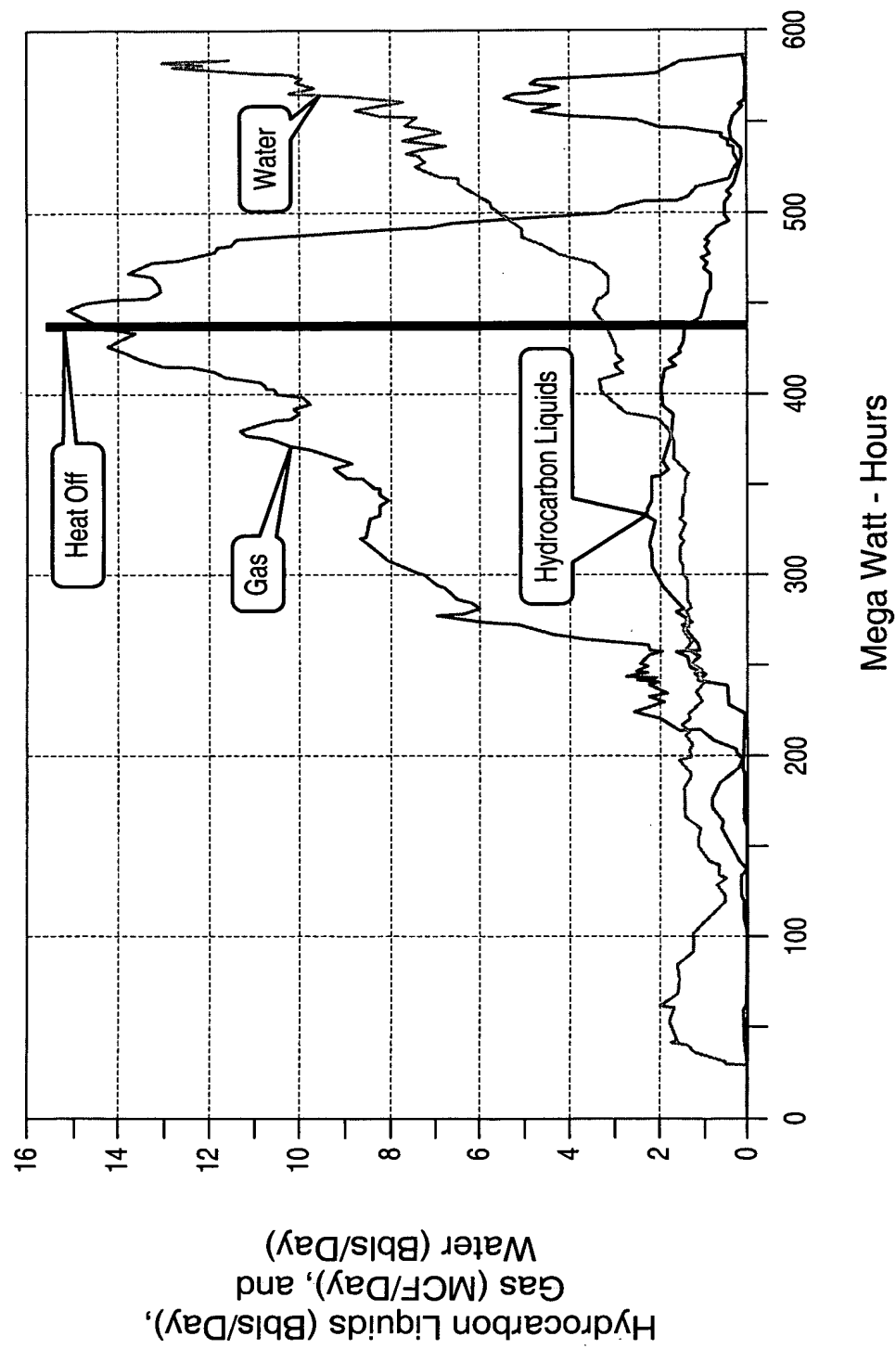


FIG. 176

T04240" S02F4850

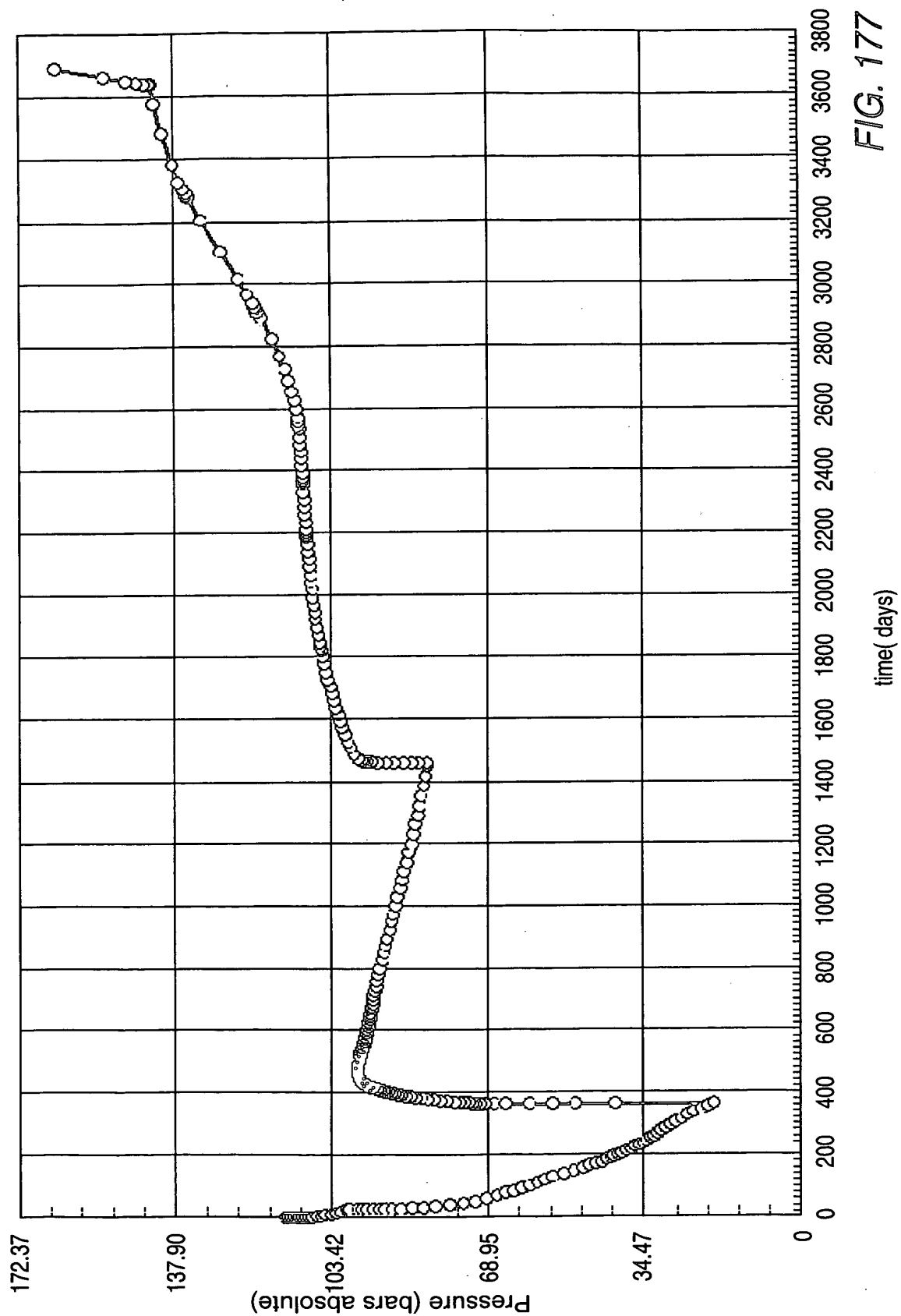


FIG. 177

FOH2H0" S0E F4B50

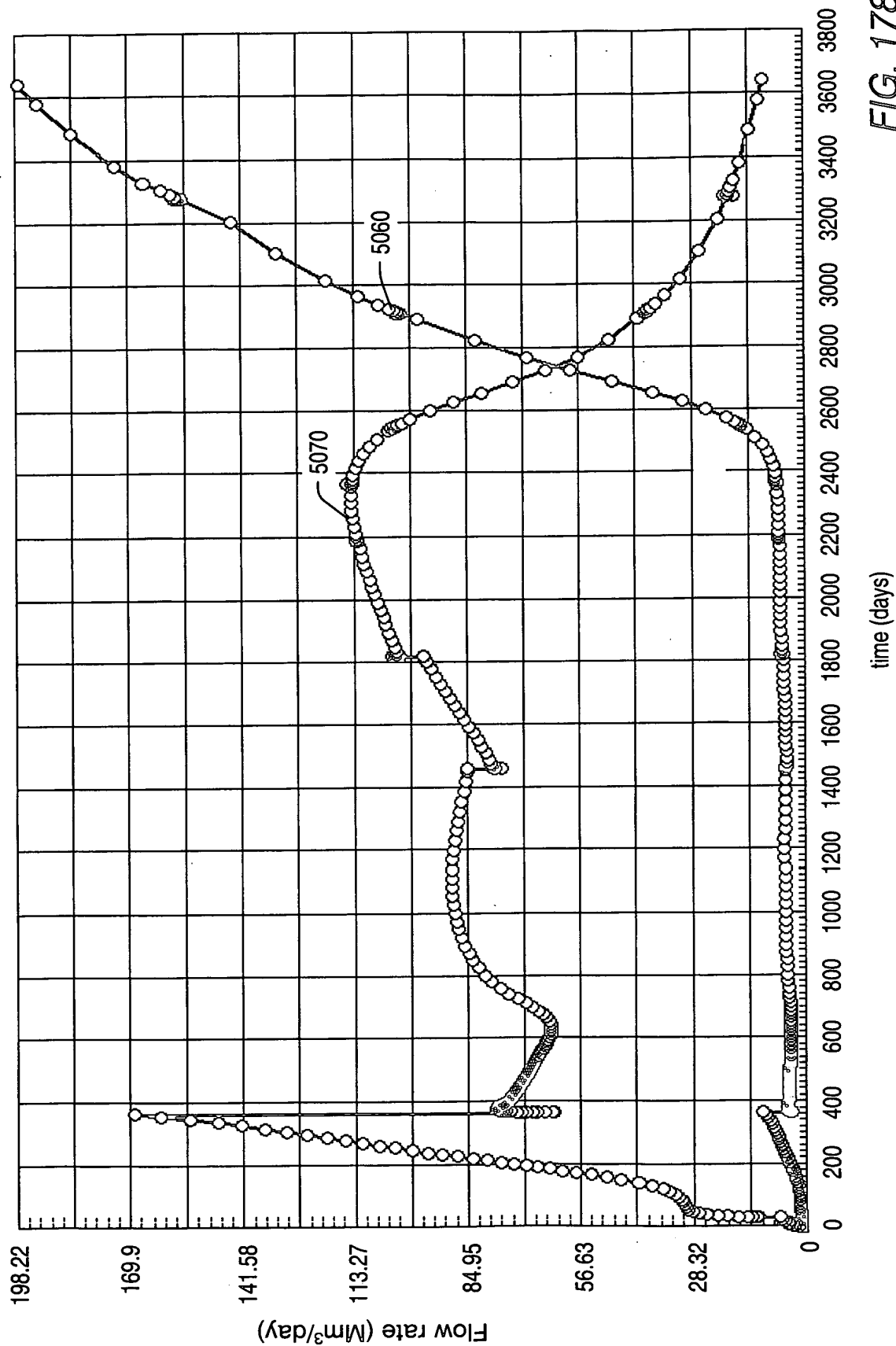


FIG. 178

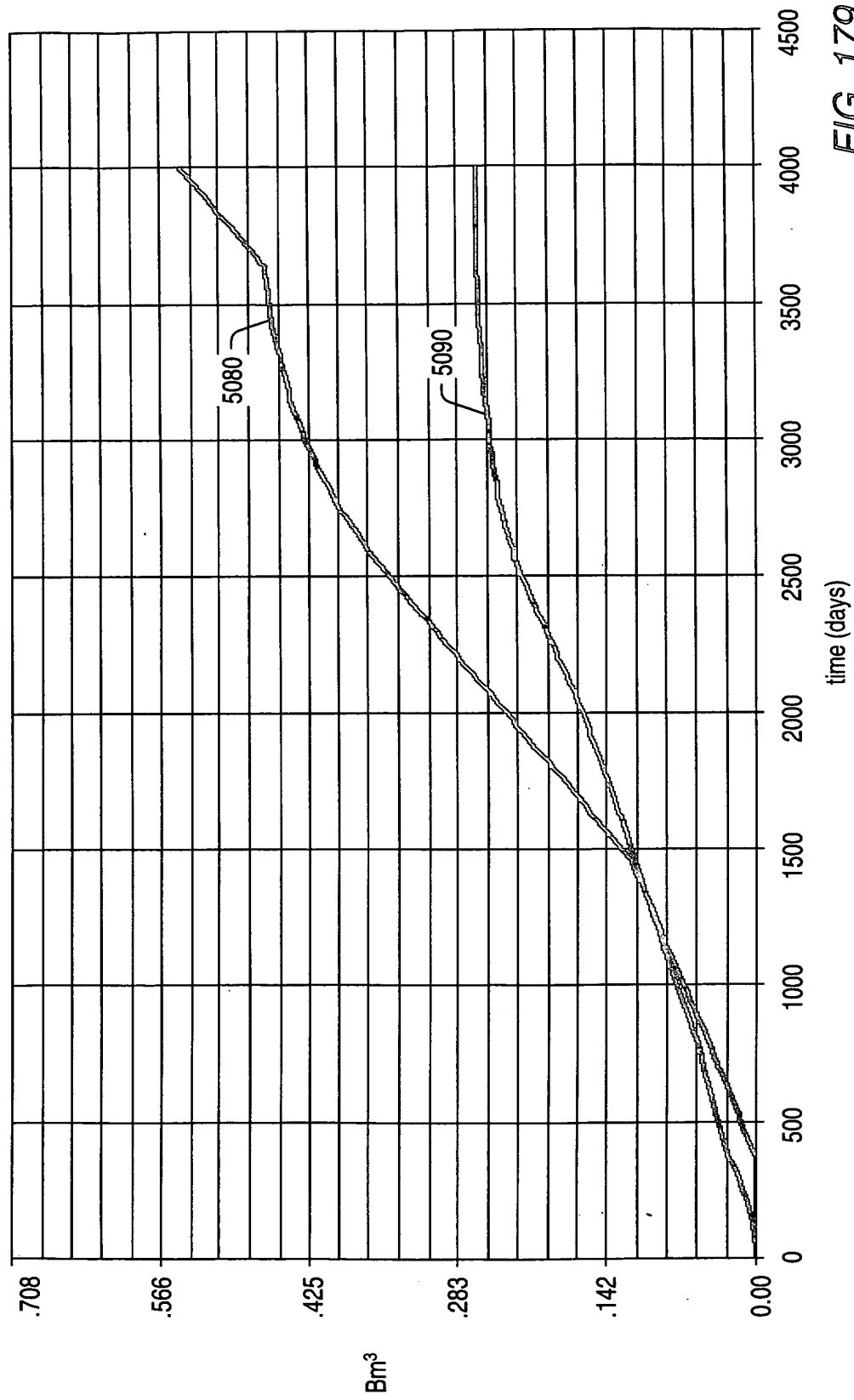


FIG. 179

FOH240" S0E F1860

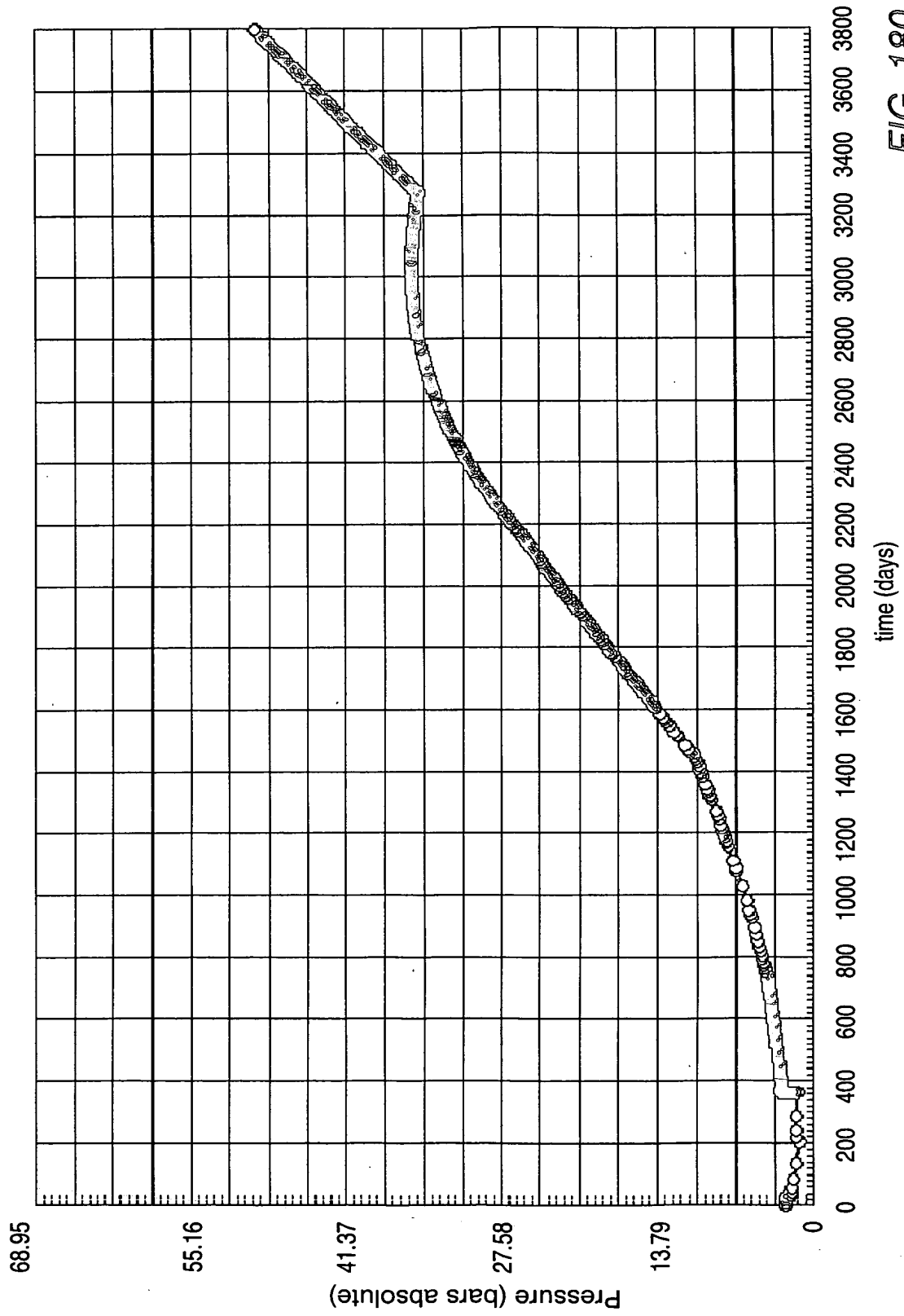


FIG. 180

FORZHO" S0ETHE60

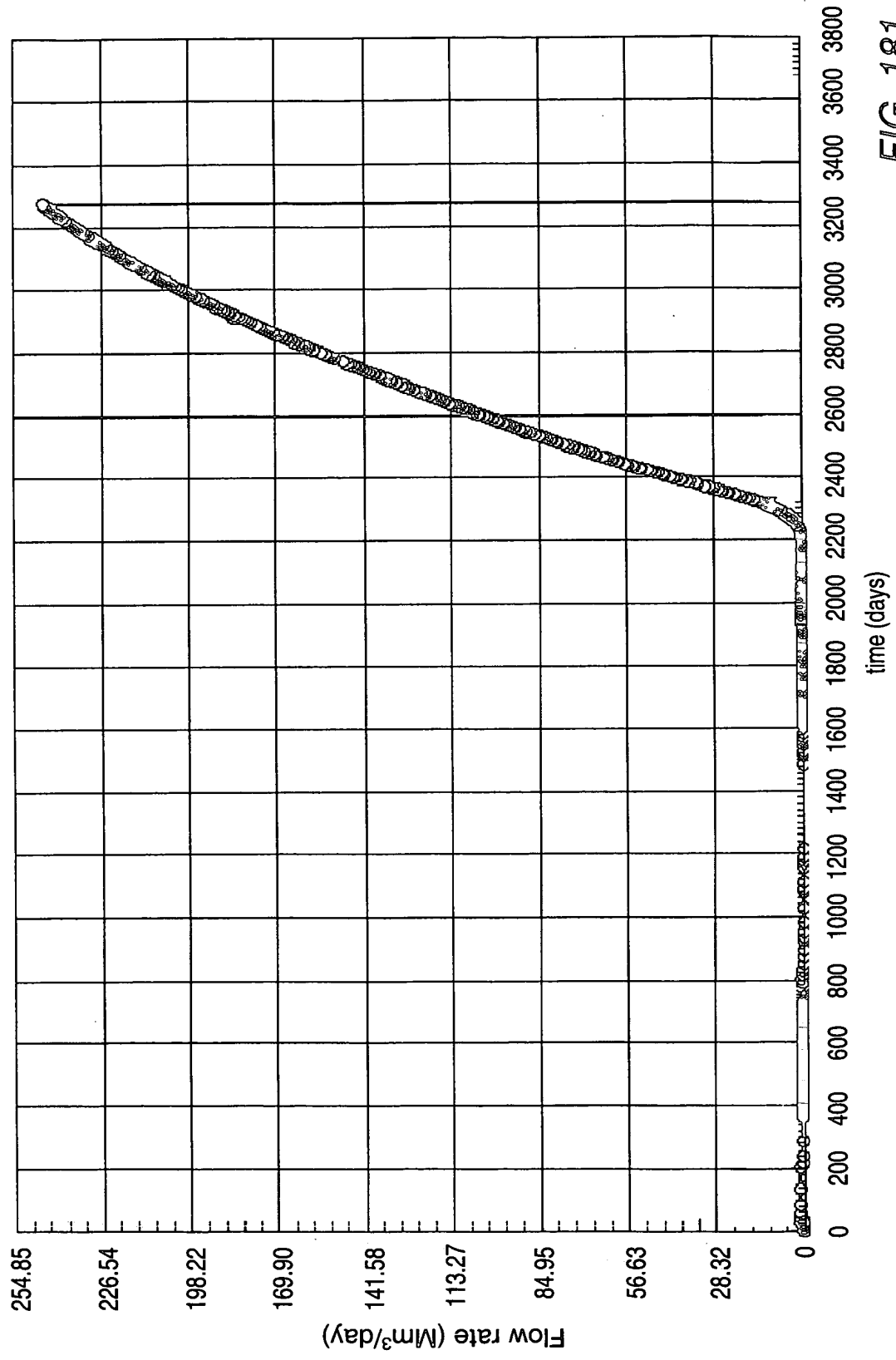


FIG. 181

TD4240-50ET1860

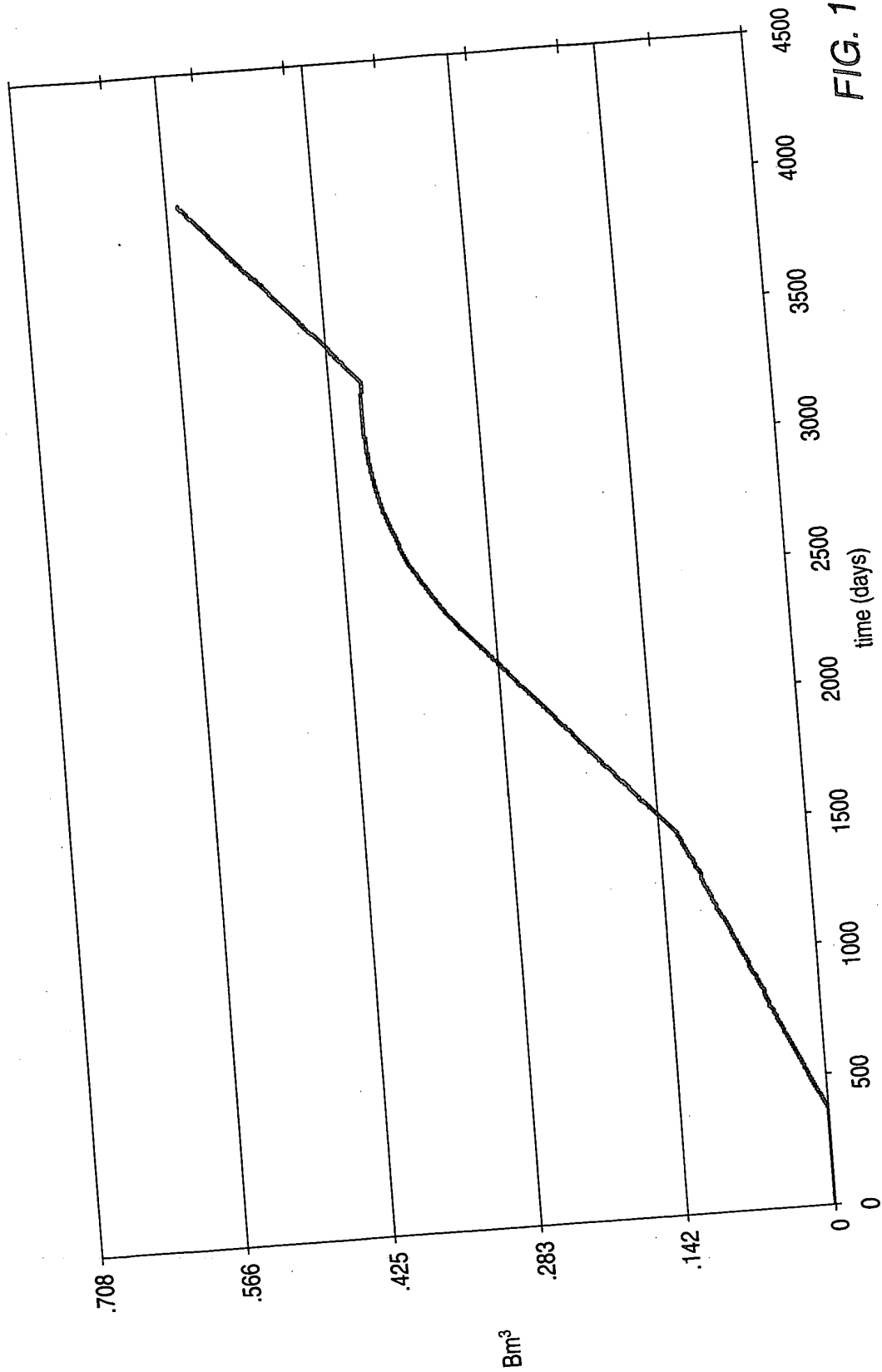


FIG. 182